

INNOVATIVE APPROACHES TO LANGUAGE EDUCATION:

AI CHATBOTS, TRANSLATORS AND VOICE GENERATORS

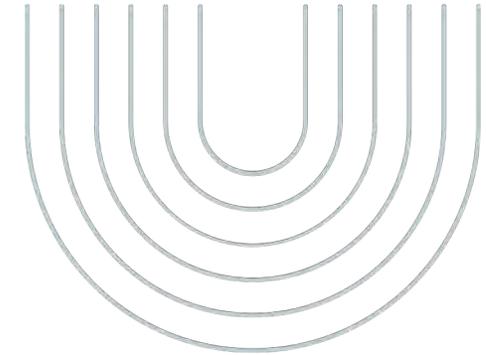
AI를 활용한 언어 교육의 혁신적 접근:
챗봇, 번역기 및 음성 생성기의 역할

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01. WAHT IS AI?

- What is AI?
- AI-based tools in language education
- Survey: Your experience of utilizing AI tools in learning



WAHT IS AI?

AI, or Artificial Intelligence, refers to the development of computer systems that can perform tasks that typically require human intelligence.

These tasks include learning, reasoning, problem-solving, perception, understanding natural language, and even interacting with the environment.



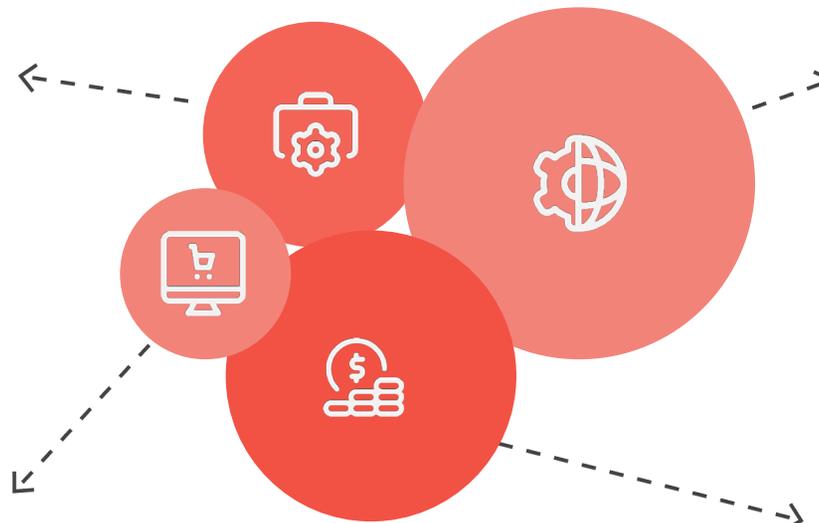
THE POWER OF AI

Data Analysis and Pattern Recognition

AI excels at processing and analyzing large datasets quickly. Machine learning algorithms can identify patterns, trends, and insights that might be challenging for humans to discover in vast amounts of data.

Natural language processing(NLP)

AI can understand, interpret, and generate human language. NLP enables applications such as voice assistants, language translation, sentiment analysis, and chatbots.



Problem Solving and Decision Making

AI systems, particularly those employing machine learning, can learn from data and make decisions without explicit programming. This is valuable for solving complex problems and making predictions based on historical data.

Learning and Adaptation

Machine learning, a subset of AI, enables systems to learn from experience and adapt to new data. This learning capability is valuable in various domains, including fraud detection, language translation, and autonomous vehicles

AI-BASED TOOLS IN LANGUAGE EDUCATION

CHATGPT

Provides conversational practice, answer language-related queries, and assist in learning through interactive conversations

AI CHATBOTS

Offers personalized language learning experiences by stimulating real conversations and providing immediate feedback

AI VOICE GENERATORS

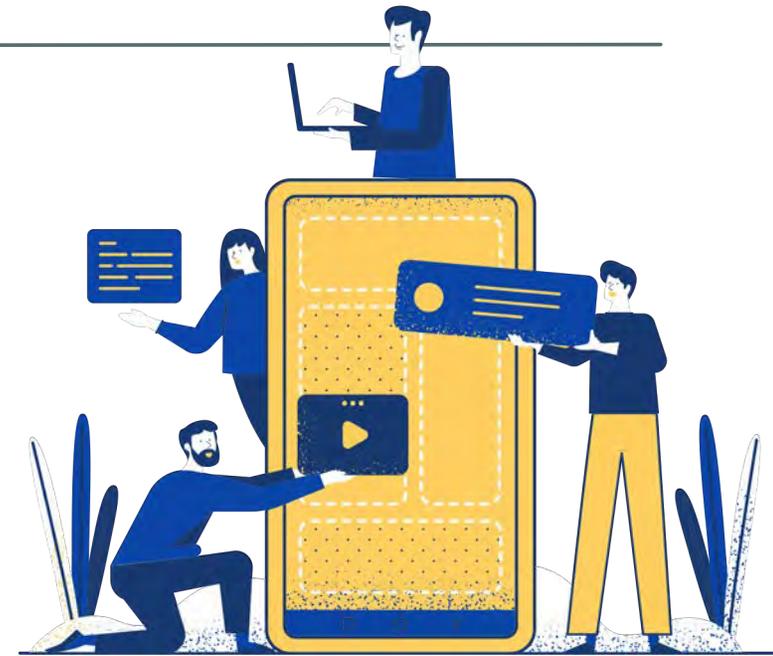
Provides audio content for language learners and helps production

AI TRANSLATORS

Aids in understanding and translating foreign language content, making it more accessible for learners

Survey

YOUR EXPERIENCE OF UTILIZING AI-BASED TOOLS IN EDUCATION



Q1. HAVE YOU EVER USED CHATGPT FOR COMPLETING YOUR ASSIGNMENTS?

Q2. HOW OFTEN DO YOU USE CHATGPT FOR ASSISTANCE WITH YOUR ASSIGNMENTS?

Q3. IN YOUR OPINION, HOW EFFECTIVE IS CHATGPT IN ASSISTING YOU WITH YOUR ASSIGNMENTS?

Q4. DO YOU BELIEVE IT IS ETHICALLY ACCEPTABLE TO USE CHATGPT FOR ASSISTANCE WITH YOUR ASSIGNMENTS?

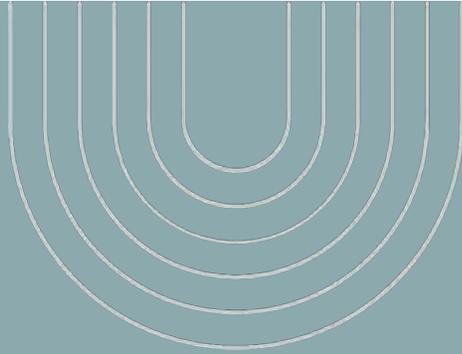
Q5. HOW WELL DO YOU THINK YOU UNDERSTAND THE ETHICAL CONSIDERATIONS SURROUNDING THE USE OF CHATGPT FOR ASSIGNMENTS?

Q6. WHEN USING CHATGPT FOR ASSIGNMENTS, DO YOU DISCLOSE OR MENTION ITS USE TO YOUR INSTRUCTORS OR PEERS?

Q7. DO YOU THINK USING CHATGPT FOR ASSIGNMENTS POSITIVELY OR NEGATIVELY AFFECTS YOUR LEARNING EXPERIENCE?

Q8. HAVE YOU EVER USED AI CHATBOTS FOR ENGLISH SPEAKING PRACTICE?

Q9. HAVE YOU EVER USED AI TRANSLATORS FOR ENGLISH HOMEWORK AND/OR ASSIGNMENTS?



02. CHATGPT IN LANGUAGE EDUCATION

- What is ChatGPT?
- Usage cases of ChatGPT
- Example 1: Using ChatGPT in Korean writing assignments
- Example 2: Using ChatGPT to check Korean grammar
- Discussions: Benefits vs. challenges

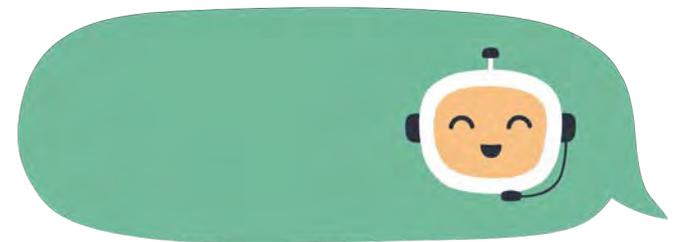


WHAT IS CHATGPT?

ChatGPT is a language model developed by OpenAI.

It is part of the GPT (Generative Pre-trained Transformer) series, which employs transformer architecture for natural language processing tasks.

The "Chat" in ChatGPT indicates its focus on generating human-like responses in a conversational context.



Key features of ChatGPT

- **Conversational Interaction:** ChatGPT is designed to engage in natural and dynamic conversations. Users can input prompts or messages, and the model responds accordingly.
- **Pre-training on Diverse Data:** Like other GPT models, ChatGPT is pre-trained on a vast and diverse dataset containing parts of the internet. This helps it develop a broad understanding of language and context.
- **Generative Text:** It can generate coherent and contextually relevant text, making it suitable for various natural language understanding and generation tasks.
- **Limitations:** While powerful, ChatGPT has limitations. It may generate incorrect or nonsensical answers, be sensitive to input phrasing, and exhibit verbosity. Additionally, it might not always ask clarifying questions for ambiguous queries.



CHATGPT'S USE CASES IN EDUCATION

Content creation &
Idea generation



Interview preparation
&
Simulations and role-
playing



Tutoring
&
Learning assistance



Programming assistance
&
Text-based games



Language
translations



EXAMPLE OF USING
CHATGPT FOR KOREAN
WRITING ASSIGNMENTS

STUDENTS' TOPICS FOR THE FINAL PRESENTATION

- 한국 국악
- 한국의 외모 중심 문화
- 한국 생활 **vs.** 미국 생활
- 한국에 재벌 구조의 영향으로 젊은 세대의 커지는 환멸감
- 한국의 결혼 제도 문제
- 한국의 e-스포츠 문화와 미국의 e-스포츠 문화
- 소셜 미디어가 젊은 세대에 미치는 영향
- 케이팝의 큰 문제점: 미성년 아이돌
- 한국의 교육과 취업 제도의 문제점





INSTRUCTIONS FOR USING CHATGPT FOR WRITING REVISION IN KOREAN

Step1: Prepare your first draft

- Make sure that you have already submitted your initial draft via a Google Docs link on Canvas

Step 2: Utilizing ChatGPT for revision

- Access ChatGPT, the AI-powered language model, by visiting <http://chat.openai.com>.
- Divide your text into manageable sections for revision.
- Request ChatGPT to analyze the grammar and spelling in your text. For instance, you can phrase your request as, **"Please review this section for grammar and spelling errors in Korean."**
- Thoroughly review the suggestions and corrections provided by ChatGPT.



INSTRUCTIONS FOR USING CHATGPT FOR WRITING REVISION IN KOREAN

Step 3: Rewriting for improved clarity

- Based on the feedback from ChatGPT, revise all sections. Ensure that the revised draft is not only free from errors but also reads smoothly and clearly in Korean.

Step 4: Documenting your revisions

- While revising, be sure to document the specific grammar and spelling mistakes that ChatGPT helped you identify. **Write down the changes you made and explain the reasons for these revisions.**
- **Keeping a Revision Log:** As you make changes, maintain a revision log to record the revisions you've implemented based on ChatGPT's suggestions. Highlight the specific areas where corrections were made.
- **Self-Analysis:** After revising your text, write a brief self-analysis or reflection on your writing process.

SAMPLE OF STUDENT'S REVISION



01. Original draft



이번 발표를 통해서 저는 한국의 결혼 제 문제에 대해서 이야기 할 것이다. 한국은 결혼 문제과 출산율 문제들에 관련된 독특한 과제들 있는 나라이다. 한국 전쟁은 아직 제대로 제대로 끝나지 않아서 한반도는 세계에서 적대적인 곳 중 하나라서 한국 군대에 비해서는 경제과 사회 발전을 위해서 투입되는 것은 적을지도 모르다.

02. ChatGPT's edits



Here's your section with corrected grammar and spelling errors in Korean:

이번 발표를 통해, 저는 한국의 결혼 제도와 출산율 문제에 대해 이야기할 것입니다. 한국은 결혼 문제와 출산율 문제와 관련된 독특한 과제를 가진 나라입니다. 한국 전쟁은 아직 제대로 끝나지 않아서 한반도는 세계에서 적대적인 곳 중 하나입니다. 한국 군대에 비해 경제와 사회 발전을 위해 투입되는 것이 적을지도 모릅니다.

SAMPLE OF STUDENT'S REVISION



03. My revision log and self-analysis



ChatGPT made several changes in the introduction section, and I will analyze why ChatGPT made those modifications and what I used in my revision.

1. "이번 발표를 통해서" -> "이번 발표를 통해"

Explanation: I believe that both '을 통해' and '을 통해서' can be used in this context, but ChatGPT changed '통해서' to '통해'. However, I prefer to keep the original phrase '이번 발표를 통해서' in my revision, as it remains grammatical.

2. "이야기 할 것이다" -> "이야기 할 것입니다"

Explanation: I noticed that ChatGPT changed all verb endings to the deferential style (-입니다/-습니다). Since this is typically used in formal writing and very polite Korean speech, I will consider using it consistently in my revised draft.

SAMPLE OF STUDENT'S REVISION



04. My revision



Here is my revision. You can see the parts highlighted in yellow that ChatGPT corrected to indicate the changes.

"이번 발표를 통해서, 저는 한국의 결혼 제도와 출산율 문제에 대해 이야기할 것
입니다. 한국은 결혼 문제와 출산율 문제와 관련된 독특한 과제를 가진 나라입니
다.

05. Student's feedback about using chatGPT for writing revision

Using ChatGPT to revise my work was a good learning experience. I noticed that while my sentences were generally okay, it made me realize that **I need to improve a bit more in terms of sentence structures to make my sentences more clear and concise.**

ChatGPT helped me with this by providing me with suggestions to make my work more clear and defined. Additionally, being able to examine and analyze **why ChatGPT made certain suggestions or modifications helped me to better understand how I can improve my Korean as well as help me identify certain mistakes in my writing.**

I also noticed that I need to **be more consistent with my particles and verb endings.** ChatGPT helped me see this as I had to understand and try to fix those common mistakes.



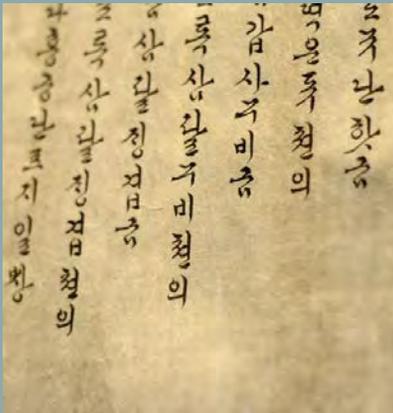


EXAMPLE OF USING CHATGPT FOR KOREAN GRAMMAR

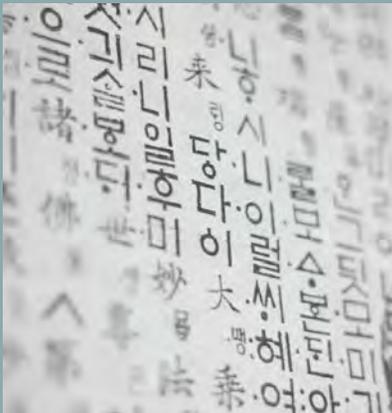
INTERMEDIATE KOREAN GRAMMAR



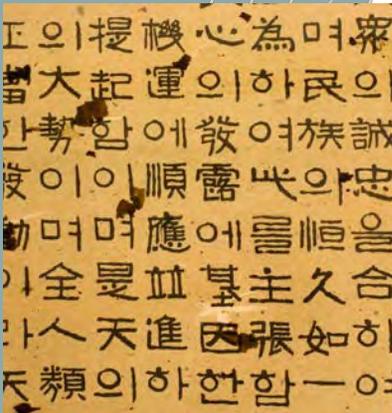
다치다



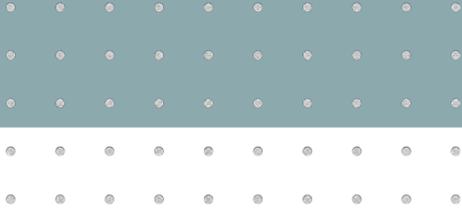
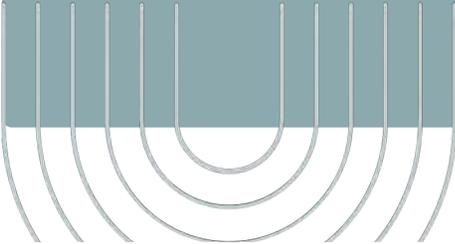
상하다



망가지다



고장나다





Certainly! Let's explore the differences between the Korean verbs 다치다 (dachida), 상하다 (sanghada), 망가지다 (manggajida), and 고장나다 (gojangnada), all of which are related to damage or harm, but with nuanced distinctions:

다치다 (dachida):

This verb is primarily used when referring to physical injuries or harm to a person.

Example: "사고에서 다쳤어요." (I got injured in the accident.)

상하다 (sanghada):

상하다 is a versatile term that can be used to describe both physical and non-physical damage. It's often used in a broader sense than 다치다.

Example 1 (physical damage): "자동차가 상해 있어요." (The car is damaged.)

Example 2 (non-physical damage): "계획이 상해 버렸어요." (The plan fell through.)

망가지다 (manggajida):

This verb is commonly used when something is seriously damaged, broken, or ruined. It implies a significant level of destruction.

Example: "비밀번호를 계속 틀려서 핸드폰이 망가졌어요." (I entered the wrong password too many times, so my phone is broken.)

고장나다 (gojangnada):

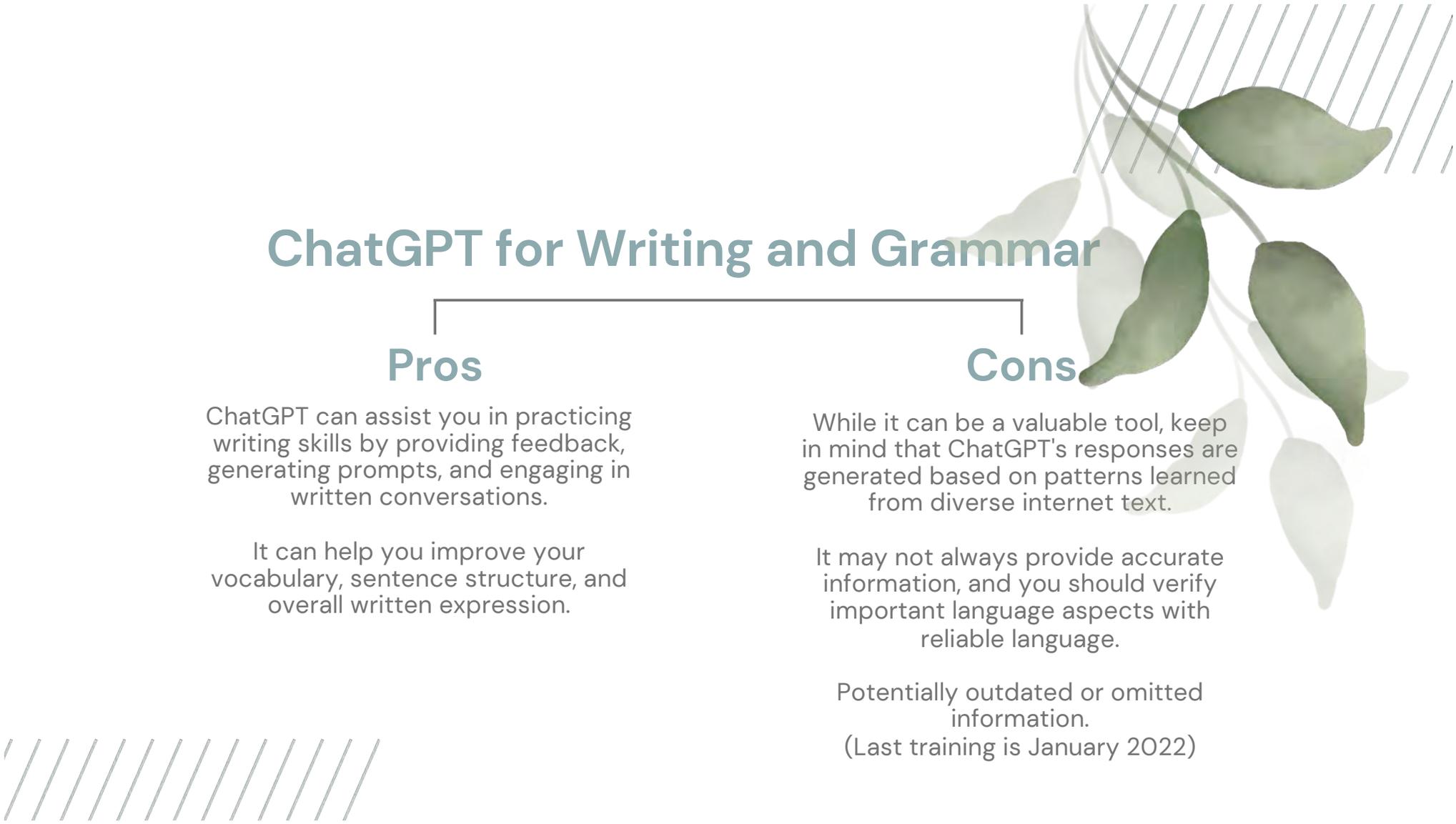
Similar to 망가지다, 고장나다 is used to describe the malfunction or breakage of machinery, devices, or systems.

Example: "컴퓨터가 고장났어요." (The computer is broken.)

In summary, while 다치다 is specifically about personal physical injury, 상하다 is a more general term for damage, 망가지다 emphasizes significant or serious damage, and 고장나다 is often used in the context of machinery or equipment malfunction. The choice among these verbs depends on the nature and severity of the damage you are describing.



ChatGPT for Writing and Grammar



Pros

ChatGPT can assist you in practicing writing skills by providing feedback, generating prompts, and engaging in written conversations.

It can help you improve your vocabulary, sentence structure, and overall written expression.

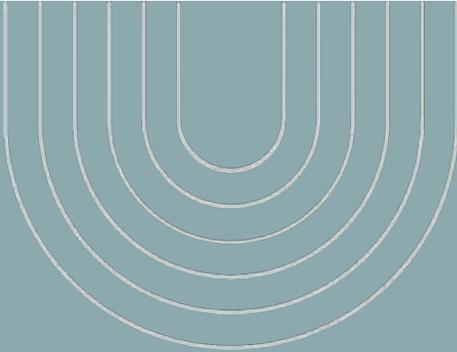
Cons

While it can be a valuable tool, keep in mind that ChatGPT's responses are generated based on patterns learned from diverse internet text.

It may not always provide accurate information, and you should verify important language aspects with reliable language.

Potentially outdated or omitted information.

(Last training is January 2022)



03. AI CHATBOTS IN LANGUAGE EDUCATION

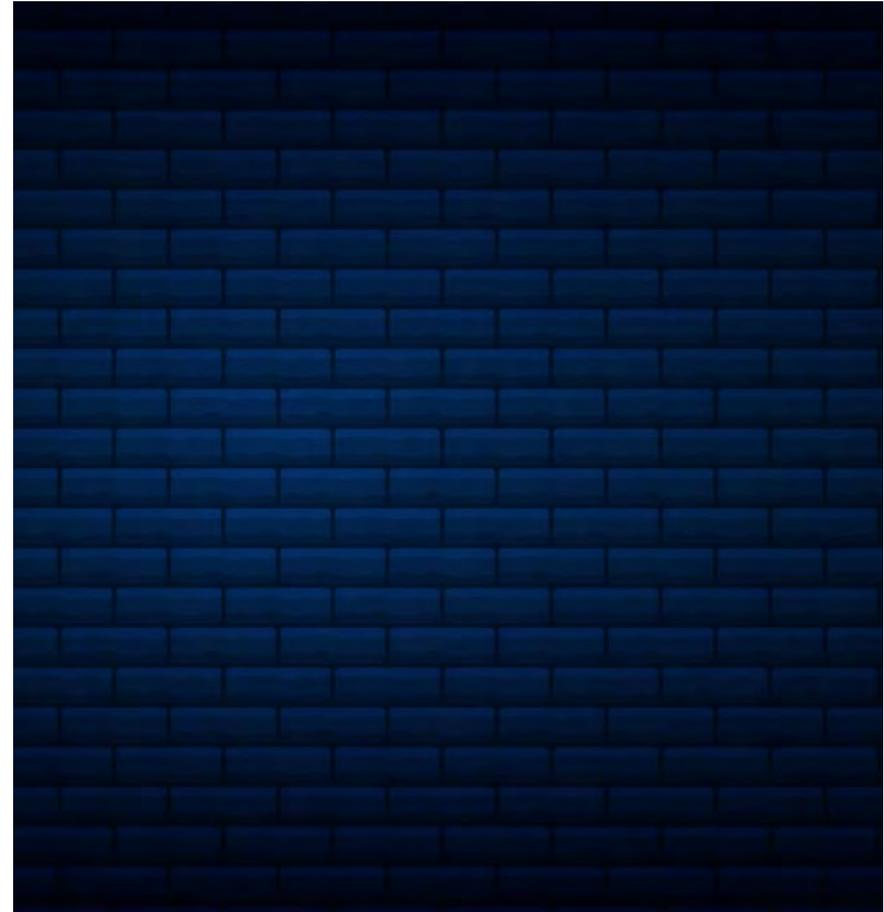
- What are AI-based chatbots?
- How to use AI chatbots to improve your foreign languages?
- Example: Using chatbots for Korean speaking practice
- Discussions: Learners' perceptions concerning the use of chatbots



WHAT ARE AI CHATBOTS?

AI chatbots, or artificial intelligence chatbots, are computer programs designed to simulate conversation with human users, especially through text or voice interactions.

These chatbots use various technologies, including natural language processing (NLP), machine learning, and sometimes even deep learning, to understand and respond to user input in a way that mimics human conversation.



GOALS

The primary goal of AI chatbots is to provide users with information, answer their questions, assist with tasks, or engage in conversation in a way that feels natural and intuitive.

Chatbots can be implemented in a variety of applications, such as customer support, virtual assistants, and even in entertainment or education.





TWO MAIN TYPES OF CHATBOTS



Rule-based chatbots

These chatbots follow a predefined set of rules and responses. They are programmed with specific patterns and responses to recognize certain keywords or phrases and provide predetermined answers. Rule-based chatbots are more limited in their ability to handle complex or unexpected queries.

AI-powered chatbots

These chatbots use artificial intelligence and machine learning algorithms to analyze and understand user input. They can adapt and improve their responses over time by learning from interactions. Natural Language Processing (NLP) is a key component of AI-powered chatbots, allowing them to understand the nuances of human language and context.



HOW TO USE AI CHATBOTS TO IMPROVE FOREIGN LANGUAGES?

Conversational Practice

- Engage in conversations with AI chatbots to practice your language skills. Many language learning chatbots are designed to simulate real-life conversations, allowing you to practice speaking, listening, and understanding the language in context.



Vocabulary Building

- Use chatbots to learn and reinforce vocabulary. Some chatbots provide word-of-the-day features or offer vocabulary quizzes. This helps expand your word bank and improves your ability to recall words in conversation.

Grammar and Syntax practice

- Work with chatbots that offer grammar correction and feedback. This can be especially helpful for understanding sentence structure, verb conjugations, and other grammatical aspects of the language.



Feedback and Progress Tracking:

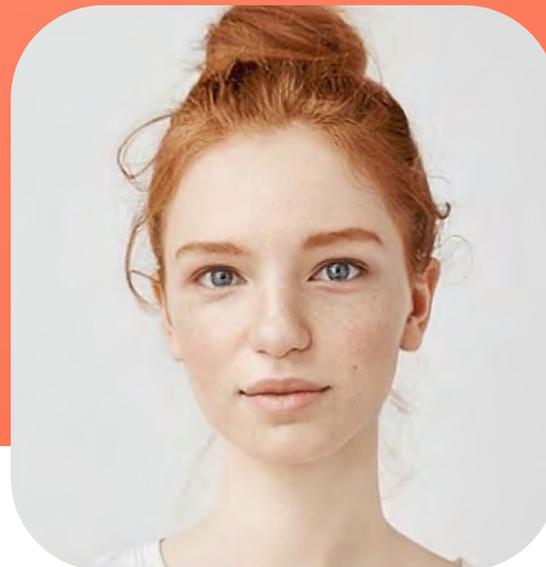
- Opt for chatbots that provide feedback on your language performance and track your progress. Constructive feedback is essential for identifying areas of improvement and reinforcing positive language habits.

AI CHABOTS FOR FOREIGN LANGUAGE LEARNING



King Sejoing Institute AI teacher

Choose a conversation topic and practice various Korean conversations based on different situations



chat.d-id.com

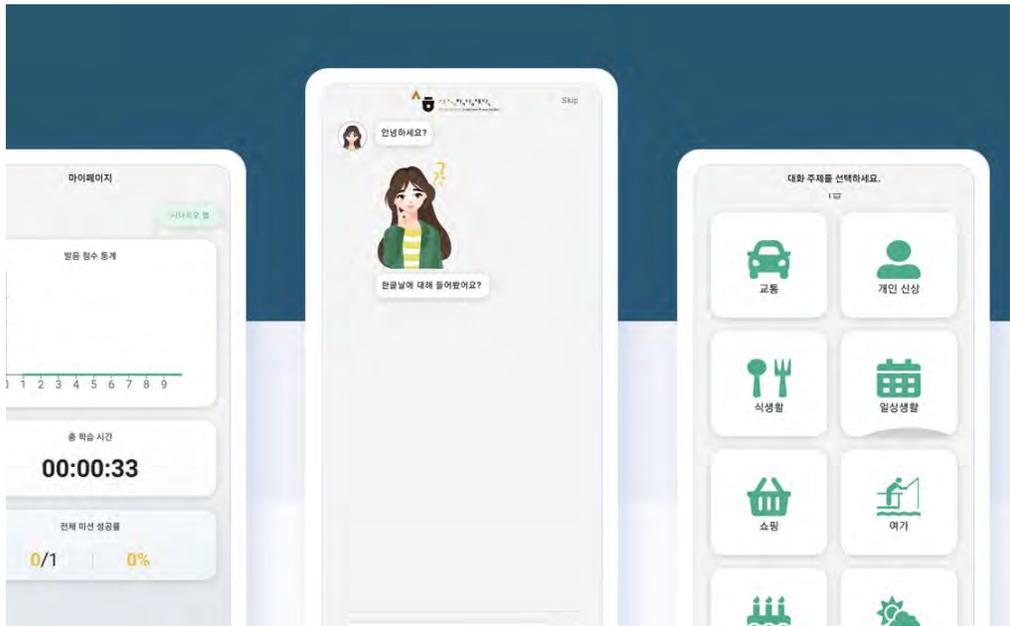
Face-to Face conversational AI chatbot
Choose your avatar and voice
Powered by ChatGPT



www.langotalk.org

Support 19+ different languages
Speak just like you would with a friend or a teacher
Powered by GPT-4

Example: Using the Sejoing AI tutor chatbot for Korean speaking practice



Example: Using the Langotalk chatbot for Korean speaking practice

Starter Chats

Free tier: 5 messages left [Upgrade](#)

 Langa Learn about Langotalk Start Here	Introduction	 Sophie Just a friendly chat	Friend
 Noah Get travel tips	Travel Guide	 Emily Ready for our date?	Date

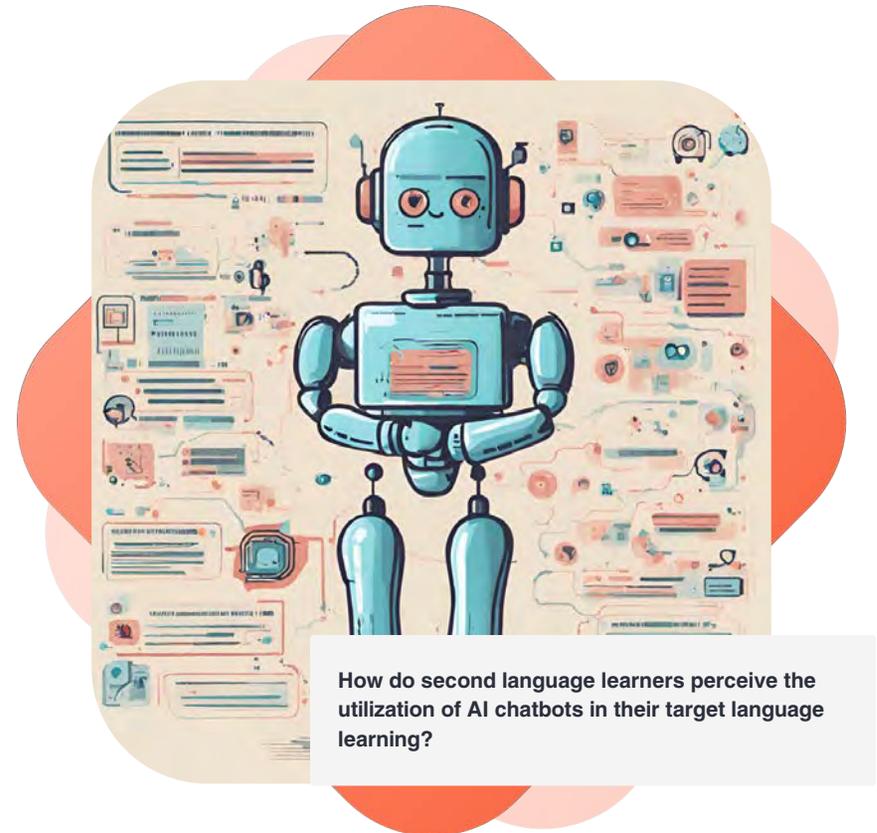
Categories

 Your Chats 5 Chats	 Friendly 8 Chats	 Beginner Friendly 5 Chats	 Roleplay 8 Chats	 Professional 4 Chats
 Fun 5 Chats	 Practice Tools	 Created		

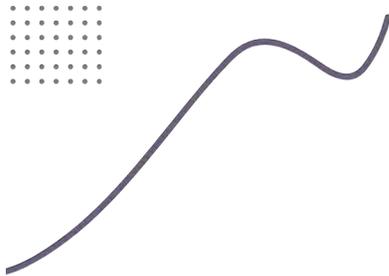


Discussion

- Learners' perceptions concerning the use of AI chatbots as conversation partners in language learning



How do second language learners perceive the utilization of AI chatbots in their target language learning?



02. Participants

26 undergraduate students who learn Korean as a foreign language at PSU

Korean level: Intermediate



01. Purpose

To investigate students' perceptions regarding the integration of AI chatbots into Korean speaking practice



03. Method: Material

Students used the Sejong Korean AI tutor (세종학당 AI 선생님) for 2 weeks both in and outside of class



04. Method: Analysis

TAM: Technology Acceptance Model (Davis 1986)
Perceived Ease of Use, Perceived Usefulness, Attitude, Behavioral Intention etc.

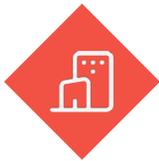


05. Results & Discussions

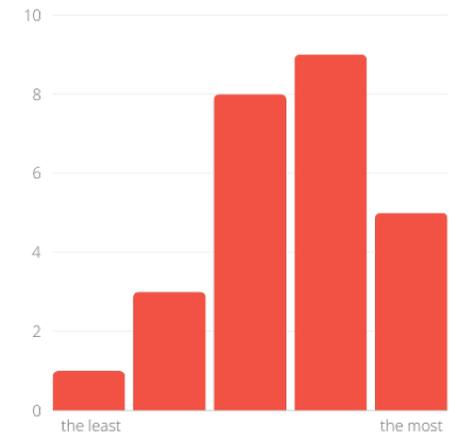
Benefits vs. Challenges of AI chatbots in enhancing Korean language skills



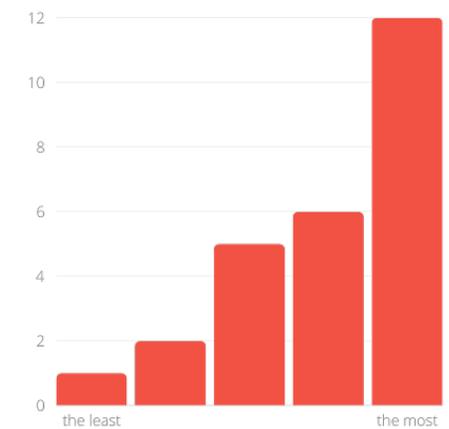
SURVEY RESULTS BASED ON TECHNOLOGY ACCEPTANCE MODEL



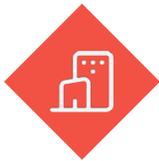
Q1. Using chatbots in language learning would increase the students' learning performance



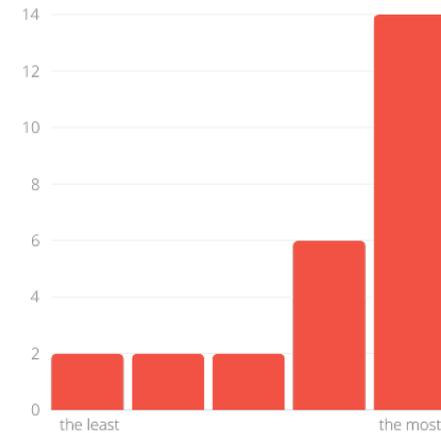
Q2. Using chatbots in language learning is useful for context-based interactions as in real life.



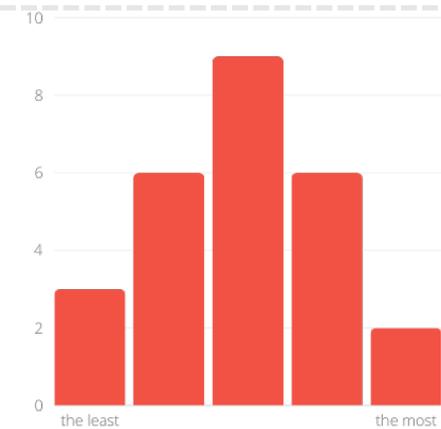
SURVEY RESULTS BASED ON TECHNOLOGY ACCEPTANCE MODEL



Q3. I like to experiment with new technologies in language learning



Q4. Among my peers, I am usually the first to explore new technologies.

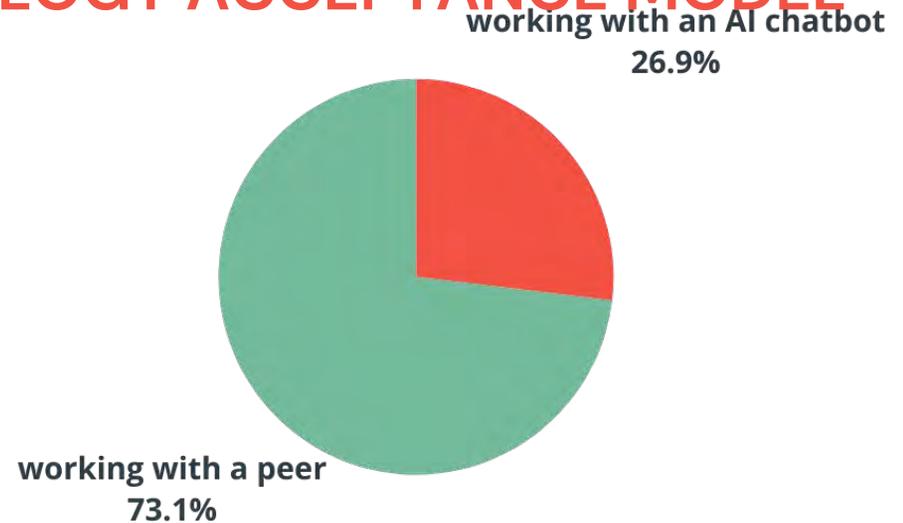


SURVEY RESULTS BASED ON TECHNOLOGY ACCEPTANCE MODEL



Q5. Which one is more effective to practice Korean?

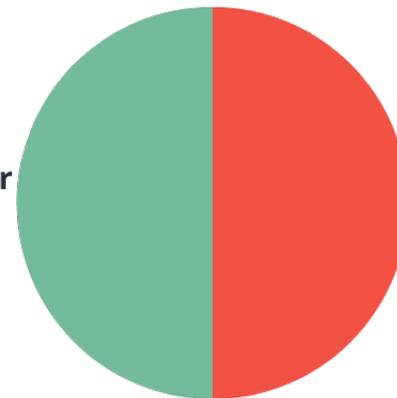
(working with a peer vs. working with an AI chatbot)



Q6. Which one is more comfortable to practice Korean?

(working with a peer vs. working with an AI chatbot)

working with a peer
50%



working with an AI chatbot
50%

STUDENTS' PERSPECTIVES ON BENEFITS AND CHALLENGES OF USING A CHATBOT



Benefits



Practice any time and anywhere



Create a more comfortable environment for students



Practice various scenarios

Challenges



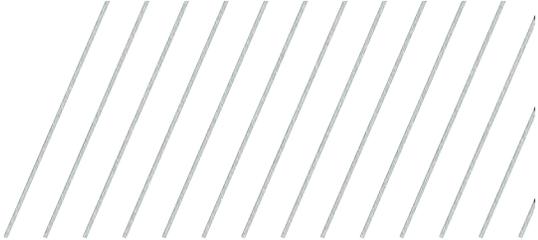
Scripts are very rigid and the chatbot is inflexible



The voice recognition does not pick up the voices well



Sometimes the AI might sound slightly unnatural or make it hard to respond to



AI Chatbot for Speaking



Pros

AI chatbots can provide a platform for practising spoken language.

Some chatbots are designed to simulate conversation, helping you improve pronunciation, fluency, and conversational skills.

Cons

They may not fully replicate the nuances of human conversation, and their responses might be limited to programmed patterns.

Real-life speaking practice with native speakers is still invaluable for language learning.





04. AI TRANSLATORS IN LANGUAGE EDUCATION

- What are AI-powered translators?
- Usages of AI translators
- Example 1: Comparing translation quality of Korean proverbs between DeepL, Google Translate, and Naver Papago
- Example 2: Using AI translators for Korean writing assignments
- Discussions: Benefits vs. challenges



WHAT ARE AI-POWERED TRANSLATORS?

Translation tools that utilize artificial intelligence (AI) technologies to facilitate the conversion of text or speech from one language to another.

These translators go beyond traditional rule-based methods and leverage machine learning algorithms to improve accuracy and language understanding.



Key features and components of AI-powered translators

01. MACHINE LEARNING ALGORITHMS

AI-powered translators often use machine learning techniques, such as neural machine translation (NMT), to analyze and learn patterns from large datasets of multilingual content. This allows them to generate more contextually accurate translations.



02. CONTEXTUAL UNDERSTANDING

AI-powered translators aim to understand the context of the text being translated. This includes considering the meaning of words in context, idiomatic expressions, and cultural nuances, leading to more natural-sounding translations.



03. SPEECH-TO-TEXT AND TEXT-TO-SPEECH INTEGRATION

Advanced AI translation systems may include features for translating spoken language. Speech-to-text technology converts spoken words into written text for translation, and text-to-speech technology produces spoken translations.

04. MULTILINGUAL SUPPORT

AI-powered translators typically support a wide range of languages, enabling users to translate text between numerous language pairs.



POPULAR AI TRANSLATORS

GOOGLE TRANSLATE

One of the most popular and widely used AI translation services.

It offers translations for numerous languages and supports text, speech, and image translation.

DEEPL

Known for its high-quality translations, especially in European languages.

It offers a free version with limitations and a paid premium version for more features.

BING TRANSLATOR

Microsoft's translation service.

It offers text, web page and speech translation and it is integrated with Microsoft office.





EXAMPLE OF USING AI TRANSLATORS FOR KOREAN WRITING

<Student's writing in English>

Topic: Korean vs. American High School Uniform

I will compare the differences between the dress codes in the two countries. Here in America, around 20% of public schools require students to wear a uniform while over 95% of high schools in Korea require uniforms. Although most American schools enforce a dress code, many schools have become more relaxed with what students can wear; I remember in high school, students could get away with short shorts and cropped tops. In Korea the P.E. teacher normally stands at the school door as students are entering to check the dress code. The dress code isn't always the same but generally makeup and accessories aren't allowed, and students must wear nametags and girl students must wear long skirts sometimes too.



두 나라의 **복장 규정**의 차이점을 비교해 보겠습니다. 여기 미국에서는 약 **20%**의 공립학교가 학생들에게 교복을 착용하도록 **요구하고 있으며**, 한국의 **95%** 이상의 고등학교에서는 교복을 **요구합니다**. 대부분의 미국 학교는 복장 규정을 시행하지만, 많은 학교에서는 학생들이 입을 수 있는 복장에 대해 좀 더 완화되었습니다. 고등학교 시절에는 학생들이 짧은 반바지와 크롭탑을 입고 도망갈 수 있었던 것을 기억합니다. 한국에서는 **P.E.** 학생들이 복장 규정을 확인하기 위해 들어갈 때 교사는 보통 학교 문 앞에서 있습니다. 복장 규정은 항상 동일하지는 않지만 일반적으로 화장 및 액세서리는 허용되지 않으며 학생들은 **이름표**를 착용해야 하며 여학생 치마는 때때로 긴 치마를 **착용**해야 합니다.



두 나라의 복장 규정의 차이점을 비교해 보겠습니다. 미국은 공립학교의 약 **20%**가 교복 착용을 **의무화하고 있고**, 한국은 고등학교의 **95%** 이상이 교복 착용을 **의무화하고** 있습니다. 대부분의 미국 학교가 복장 규정을 시행하고 있지만, 많은 학교가 학생들의 복장에 대해 좀 더 느슨해져서 고등학교 때는 짧은 반바지와 크롭트 톱을 입고 다닐 수 있었던 기억이 납니다. 한국에서는 학생들이 등교할 때 체육 선생님이 학교 문 앞에서 복장 규정을 확인하는 것이 일반적입니다. 복장 규정이 항상 같은 것은 아니지만 일반적으로 화장과 액세서리는 허용되지 않으며, 남학생은 **명찰**을 착용해야 하고 여학생은 긴 치마를 **입어야 하는 경우도** 있습니다.



나는 두 나라의 **드레스 코드**의 차이점을 비교할 것입니다. 여기 미국에서는 공립학교의 약 **20%**가 학생들에게 교복을 **요구하는 반면**, 한국의 고등학교의 약 **95%** 이상이 교복을 **요구합니다**. 대부분의 미국 학교들이 드레스 코드를 시행하지만, 많은 학교들은 학생들이 입을 수 있는 것에 대해 더 편안해졌습니다. 고등학교 때 학생들은 짧은 반바지와 크롭된 상의를 입고 도망갈 수 있었습니다. 한국에서는 보통 체육 선생님이 학교 문 앞에서 **드레스 코드**를 확인합니다. 드레스 코드가 항상 똑같지는 않지만 일반적으로 화장과 액세서리는 허용되지 않으며, 학생들은 **나메탁**을 **입어야 하며** 여학생들도 때때로 긴 치마를 **입어야** 합니다.

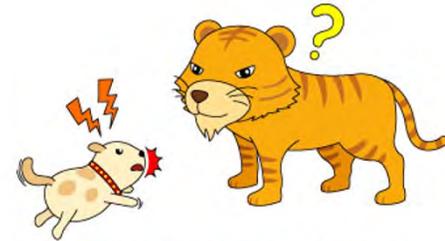
Korean proverbs



하늘이 무너져도 솟아날 구멍이 있다



가는 밤이 그오야 오는 밤이 궁다



하룻강아지 범 무서운 중 모른다



둥다리도 두들겨 보고 건너라

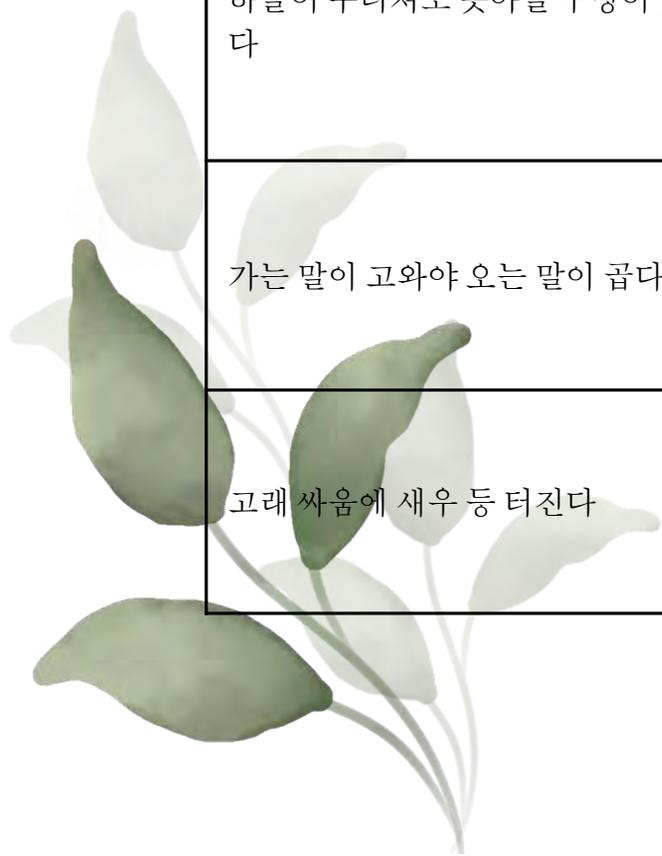


타끌 모아 태산

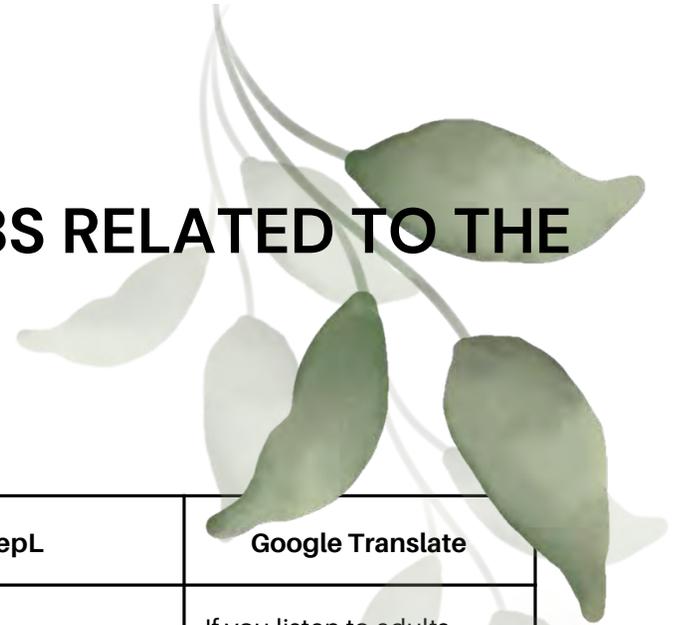


고래 싸움에 새우등 터진다

한국 속담	Naver Papago	DeepL	Google translate
하늘이 무너져도 솟아날 구멍이 있다	There is always a way.	Even when the sky is falling, there's a hole to rise through	Even if the sky falls, there is a hole to rise up from.
가는 말이 고와야 오는 말이 곱다	One ill word asks another.	What goes around comes around	If the word you say is good, then the word coming back at you is good
고래 싸움에 새우 등 터진다	An innocent bystander gets hurt in a fight.	Shrimp backs explode in whale fight	Shrimp's back explodes during a whale fight



TRANSLATIONS OF KOREAN PROVERBS RELATED TO THE WORD '떡'



한국 속담	Naver Papago	DeepL	Google Translate
어른 말을 잘 들으면 자다가도 떡이 생긴다	If you listen to adults carefully, you will have rice cakes even in your sleep.	If you listen to the adults, you'll have rice cakes in your sleep.	If you listen to adults carefully, you will have rice cakes even in your sleep.
미운 아이 떡 하나 더 준다	Give the ugly child another rice cake	Give the ugly child another rice cake	Ugly child, give me one more rice cake
떡 본 김에 제사 지낸다	I'm going to hold a memorial service while I'm watching the rice cake.	I'll make a sacrifice while I'm at it.	I hold a memorial service after seeing the rice cake.

AI Translators for Grammar and Writing



Pros

Translation tools can aid in understanding grammar rules, vocabulary, and sentence structures.

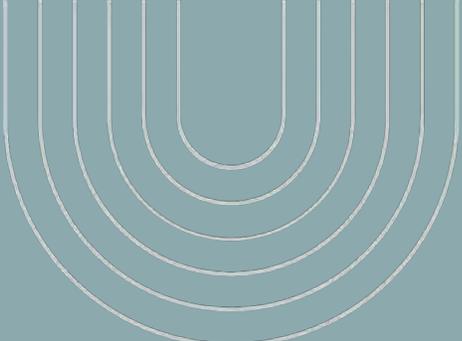
They can serve as a quick reference for language comprehension and expression.

Cons

Translators may struggle to capture the full context of a sentence, leading to potential inaccuracy in translation, especially idiomatic expressions, humour or culturally specific references.

Relying solely on translation tools may hinder your ability to think in the target language.

It's essential to use them as a supplement rather than a primary learning method.



05. AI VOICE GENERATORS IN LANGUAGE EDUCATION

- What are AI voice generators?
- Applications of AI generators
- Example: How to use AI voice generators for an English interview
- Discussions: Users' assessments of AI voice quality



WHAT ARE VOICE GENERATORS?

Voice generators, also known as text-to-speech (TTS) systems, are software or hardware tools that convert written text into spoken words.



GOALS

These systems use various algorithms and synthetic voices to generate human-like speech.

The goal is to create natural-sounding audio that can be used for a variety of applications.



USAGES OF AI VOICE GENERATORS



Language Learning

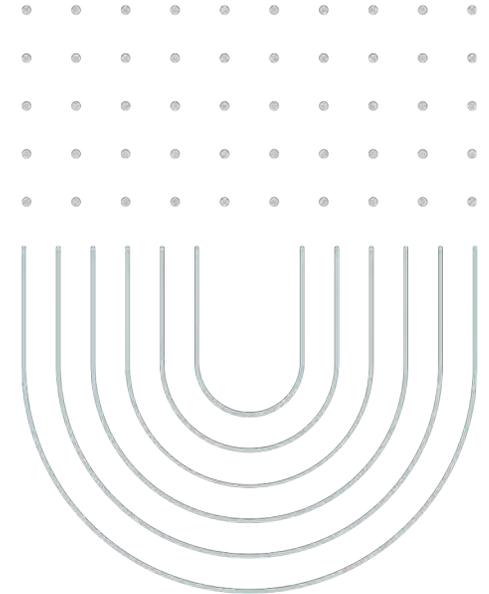
Voice generators can be used in language learning applications to help users practice pronunciation and listening skills.



Virtual Assistants

Many virtual assistants, such as Siri, Google Assistant, and Amazon Alexa, use voice generators to respond to user queries.

Others: Navigation systems (GPS), Content Creation (Convert written content, such as articles or blog posts into audio format for consumption through podcasts or audiobooks)





POPULAR AI VOICE GENERATORS

GOOGLE TEXT-TO SPEECH

provides natural sounding voices in multiple languages

AMAZON POLLY

offers lifelike voices and supports multiple languages

IBM WATSON TEXT TO SPEECH

offers natural-sounding audiotapes and supports multiple languages





RECOMMENDED AI VOICE GENERATORS FOR LANGUAGE LEARNING

11-LABS

www.elevenlab.io

offers realistic and captivating speech in 29 languages

LOVO

www.lovo.ai

offers hyper realistic AI voices
500+ voices in 100 languages

MURF

www.murf.ai

offers over 100 AI voices in 20 languages
modifies tone, pitch and speed
Add pause
Adjust the emphasis



Find Your Perfect Voice

120+ voices, 20+ languages

Search by voice name

Apply voice to entire project

English - US & Can...

Male Female Non-Binary

All age groups

Hide Pro Voices

Reset Filters

Choose a voice style

Promo Conversational

Calm Narration

Storytelling + more

Tailor-made voices for

E-Learning & Presentations

Podcasts / Audio Blogs

Advertisements + more

 Natalie (F) Young Adult PRO	 Terrell (M) Middle-Aged PRO	 Clint (M) Middle-Aged PRO	 Carter (M) Middle-Aged PRO	 Miles (M) Young Adult	 Deillah (F) Young Adult PRO NEW	 Jayden (M) Middle-Aged PRO NEW
 Amara (F) Young Adult PRO NEW	 Charles (M) Middle-Aged PRO	 Molly (F) Young Adult PRO NEW	 Julia (F) Young Adult PRO	 Caleb (M) Middle-Aged PRO NEW	 Alicia (F) Young Adult PRO	 Josie (F) Middle-Aged PRO NEW
 Finn (M) Middle-Aged PRO	 Brianna (F) Young Adult PRO	 Ronnie (M) Young Adult PRO	 Marcus (M) Young Adult PRO	 Daniel (M) Young Adult PRO	 June (F) Middle-Aged PRO NEW	 Clara (F) Middle-Aged PRO NEW
 Samantha (F) Young Adult PRO	 River (NB) Young Adult PRO NEW	 Wayne (M) Middle-Aged PRO	 Daisy (F) Young Adult PRO	 Ken (M) Middle-Aged PRO	 Michelle (F) Young Adult PRO	 Dylan (M) Middle-Aged PRO
 Evander (M) Middle-Aged PRO NEW	 Cooper (M) Young Adult PRO	 Naomi (F) Middle-Aged	 Claire (F) Middle-Aged	 Iris (F) Young Adult	 Lucas (M) Middle-Aged	 Jule (F) Middle-Aged

EXAMPLE (11 LAB)

Speech Synthesis

Unleash the power of our cutting-edge technology to generate realistic, captivating speech in a wide range of languages.

Settings

Bella + Add voice

Voice Settings

Eleven Multilingual v2

Text

I prioritize fostering an enthusiastic learning environment in my classroom. It's not just about fulfilling my role as an educator; it's about my deep passion for the subject matter. I firmly believe that if I'm genuinely excited about what I'm teaching, it will naturally transfer to my students. So, to create this excitement, I incorporate multimedia resources such as K-pop, K-drama, and movies that connect the subject matter to real-life experiences. I also provide interactive and collaborative pair and group activities, such as role-plays, problem-solving tasks, and peer correction, to make Korean language learning more enjoyable and engaging.

654 / 2500 Total quota remaining: 2313

Generate

Bella, 10.17.23, 16:58

9:00 | 9:45



Speech Synthesis

Unleash the power of our cutting-edge technology to generate realistic, captivating speech in a wide range of languages.

Settings

Bella

Voice Settings

Eleven Multilingual v2

Text

I prioritize fostering an enthusiastic learning environment in my classroom. It's not just about fulfilling my role as an educator; it's about my deep passion for the subject matter. I firmly believe that if I'm genuinely excited about what I'm teaching, it will naturally transfer to my students. So, to create this excitement, I incorporate multimedia resources such as K-pop, K-drama, and movies that connect the subject matter to real-life experiences. I also provide interactive and collaborative pair and group activities, such as role-plays, problem-solving tasks, and peer correction, to make Korean language learning more enjoyable and engaging.

654 / 2500 Total quota remaining: 2313

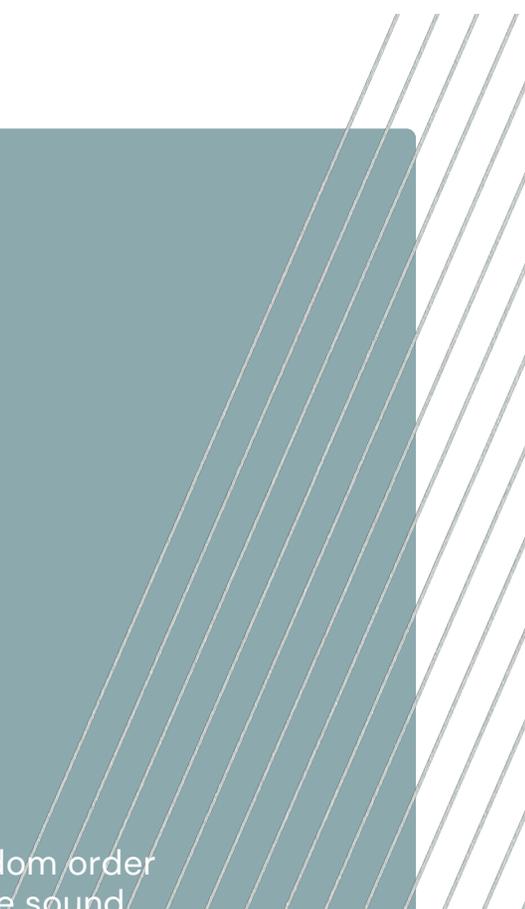
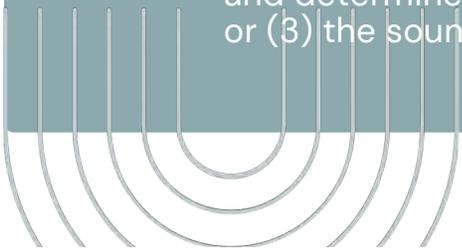


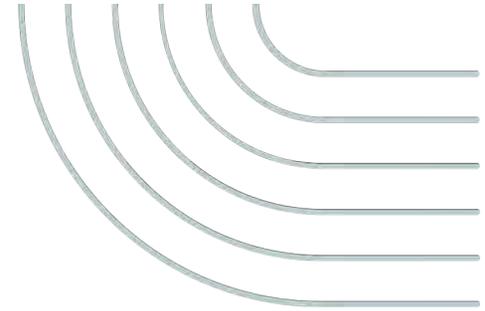
EXPERIMENT

USERS' PERCEPTION OF AI-GENERATED VOICE

Participants: 19 native Koreans in their 20s participated in the speech perception task.

Procedure: They were asked to listen to 40 sentences in Korean in random order and determine whether the sound is (1) Korean native sound, (2) machine sound, or (3) the sound of a foreigner



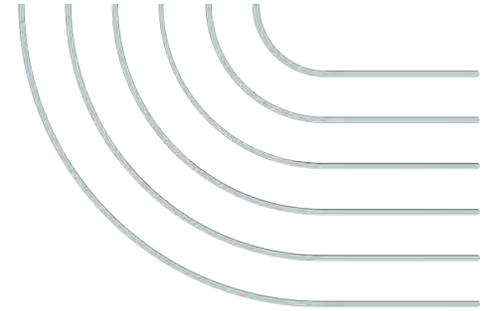


DISCUSSIONS: USERS' ASSESSMENTS OF AI VOICE QUALITY

Voice 1 (Female)



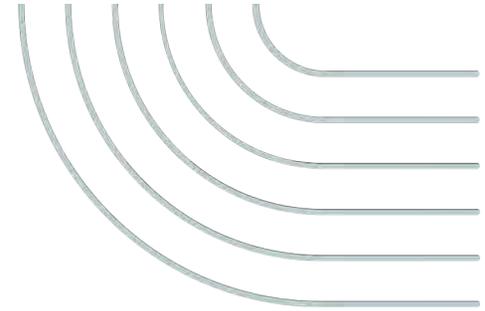
DISCUSSIONS: USERS' ASSESSMENTS OF AI VOICE QUALITY



Voice 2 (Female)



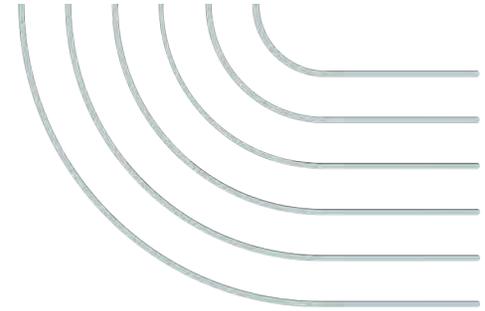
DISCUSSIONS: USERS' ASSESSMENTS OF AI VOICE QUALITY



Voice 1 (male)



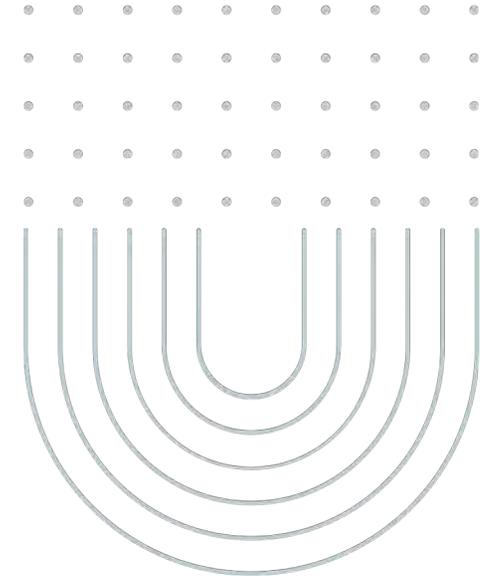
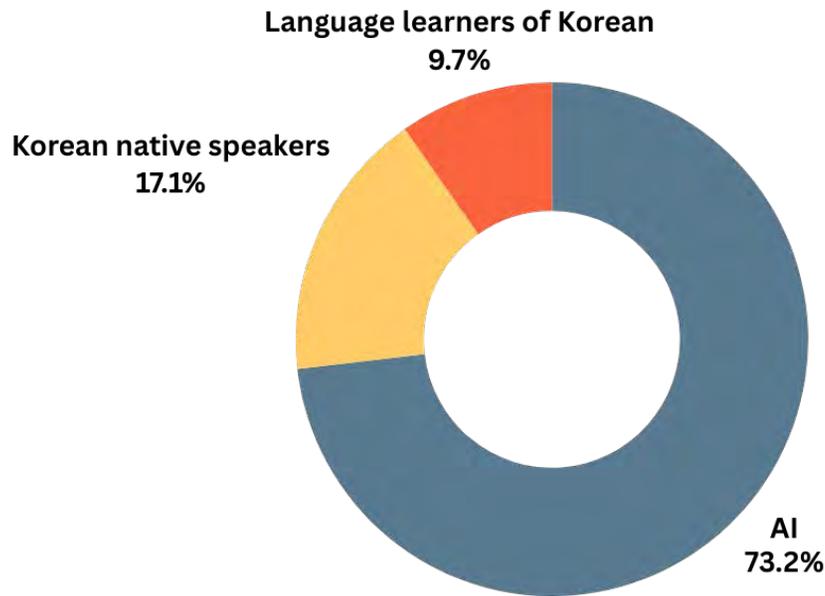
DISCUSSIONS: USERS' ASSESSMENTS OF AI VOICE QUALITY



Voice 2 (Female)

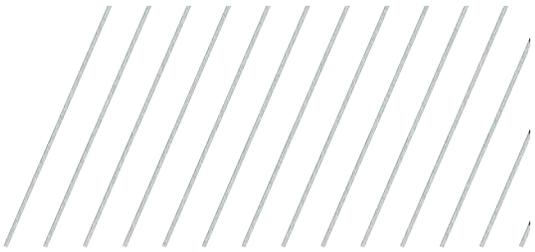


Result



Finding 1: Around 17.1 % of participants chose Korean NS when listening to AI voice.

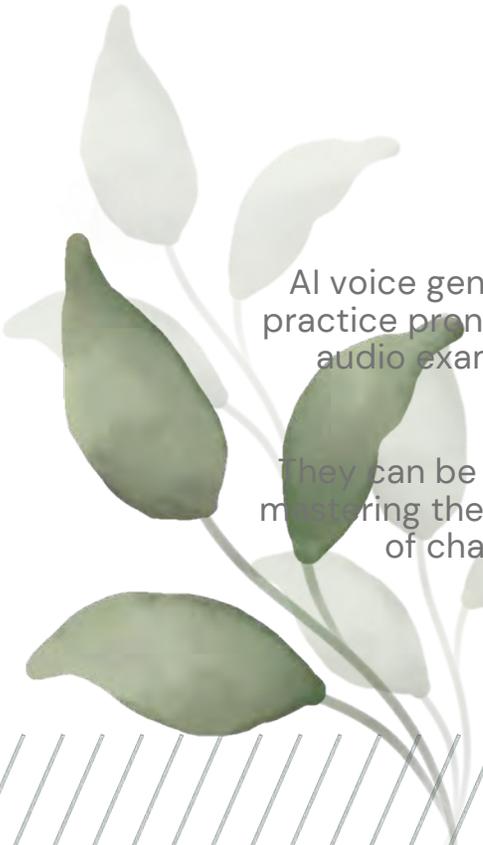
Finding 2: Female AI voices are more likely to be heard as Korean NSs than Male AI voices.



AI Voice Generators for Pronunciation



Pros



AI voice generators can help you practice pronunciation by providing audio examples of words and phrases.

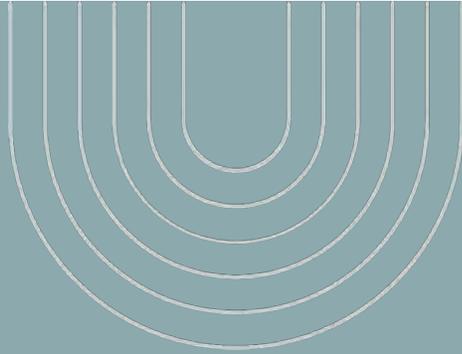
They can be particularly useful for mastering the correct pronunciation of challenging words.

Cons

While AI voice generators can be helpful, they might not cover all regional accents and variations.

It's beneficial to supplement this with exposure to authentic native speaker pronunciation.





06. FUTURE DIRECTION OF AI-ASSISTED TOOLS IN LANGUAGE EDUCATION



THE FUTURE OF AI EDUCATIONAL TOOLS



01. PERSONALIZED LEARNING

AI can analyze individual learning patterns and preferences to tailor educational content, pacing, and assessments to each student's needs.

02. GLOBAL ACCESSIBILITY

AI educational tools have the potential to provide learning opportunities to individuals worldwide, breaking down geographical barriers. This can be democratized education and make quality learning resources more accessible.

03. AI-GENERATED CONTENT AND RESOURCES

AI tools can assist in creating educational content, generating quizzes, and developing interactive materials. This can help educators save time and focus on more personalized interactions with students.

04. COLLABORATION BETWEEN HUMANS AND AI

The future will likely see increased collaboration between human educators and AI tools. AI can handle repetitive tasks, allowing educators to focus on mentorship, guidance and fostering critical thinking skills.



THE FUTURE OF AI EDUCATIONAL TOOLS



05. NATURAL LANGUAGE PROCESSING (NLP) FOR LANGUAGE LEARNING

Continued advancements in NLP will improve language learning tools, enabling more natural and contextually relevant interactions. AI chatbots can assist with conversation practice, grammar correction, and vocabulary building.

07. AUTOMATED GRADING AND FEEDBACK

AI can streamline the grading process for assignments and assessments, providing instant feedback to students. This not only saves time for educators but also enables students to learn from their mistakes more promptly.

06. VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR)

AI combined with VR and AR technologies can create immersive learning experiences. Students can engage with virtual environments, conduct experiments, and explore subjects in ways that go beyond traditional classroom settings.

08. ETHICAL CONSIDERATIONS AND BIAS MITIGATION

As AI becomes more integrated into education, there will be an increased emphasis on addressing ethical concerns, including bias in algorithms and data privacy. Strides in developing fair and transparent AI systems will be crucial.



The background is a teal color with various botanical illustrations. There are several large green leaves with prominent veins, some of which are dark green. Interspersed among the leaves are several pink flowers of different varieties, including some with many small petals and others with larger, more distinct petals. The overall aesthetic is clean and modern.

ACKNOWLEDGEMENTS

Today's lecture content is the result of a collaborative effort between ChatGPT and myself.

All images have been crafted using AI-powered magic media in Canva, and the audio files have been generated by AI voice generators.

I sincerely hope that the AI educational tools showcased in this lecture can prove beneficial for our current and future generations when used thoughtfully.



Thank you

Have any question?

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Na-Young Ryu