

Exploring the integration of AI chatbots in Korean speaking practice: Student perspectives, acceptance, and challenges

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2024 AATK conference

01.

MOTIVATIONS



인공지능 시대 교사가 만드는 미래학교

인공지능 시대의 미래 교육
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교육과학사

1

Leveraging AI Trend:

Explore the growing use of AI chatbots in Korean language learning.

2

Boosting Korean Speaking Skills

Use AI activities as an alternative to improve spoken Korean.

3


Educator & Learner Insights

Pilot study to understand educators' and learners' perspectives on AI chatbots as language partners (for a larger future study)

02.

PREVIOUS STUDIES ON AI CHATBOTS IN LANGUAGE EDUCATION

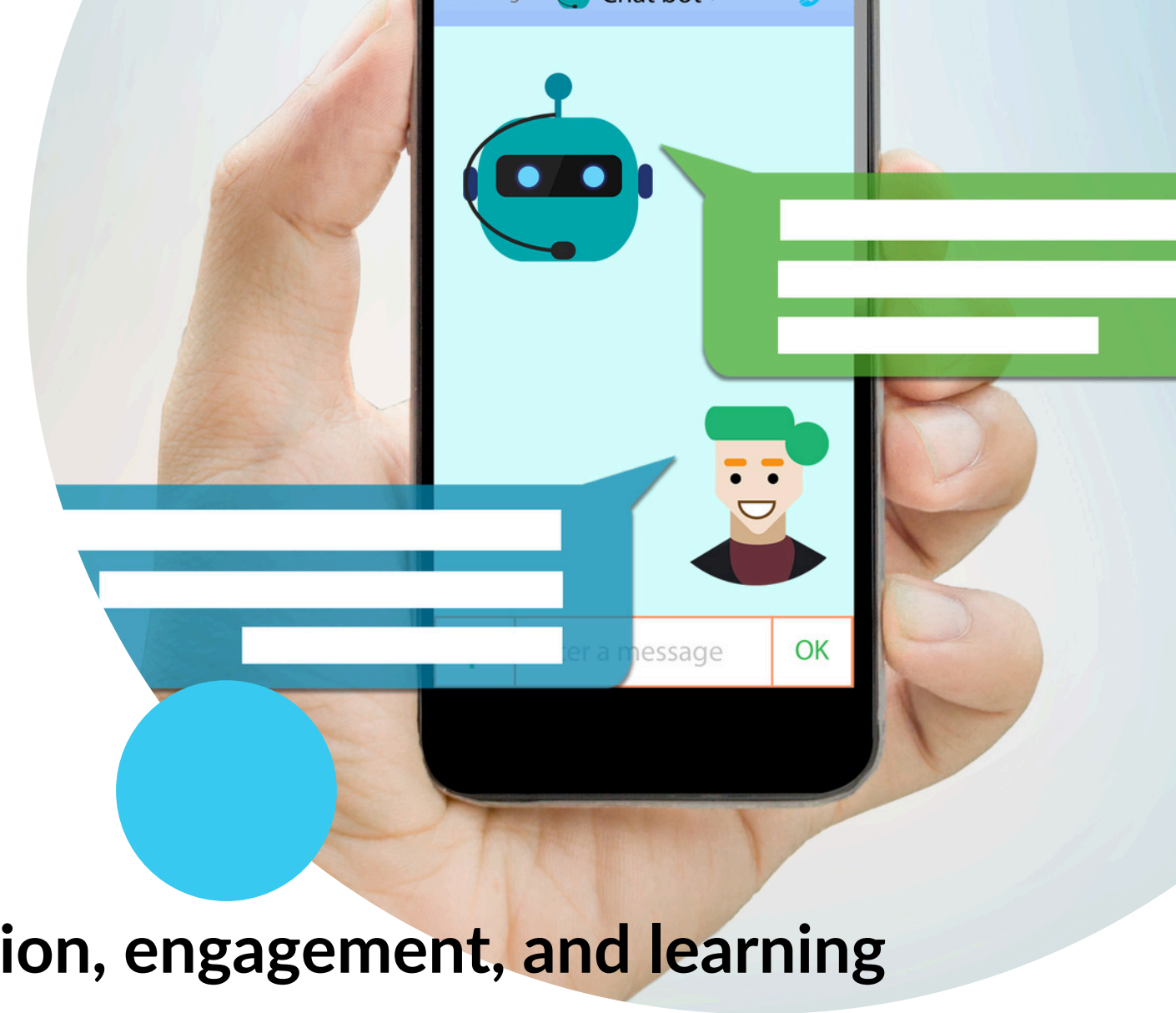
Previous Research on AI Chatbots in Language Education

- **Effectiveness:** Studies explored how well chatbots help students learning.
(Hobart & Meyer von Wolff, 2019, Hwang & Chang, 2023)
 - **Learning Experience:** Research examined if chatbots improve learning engagement.
(Winkler & Söllner, 2018, Thomas, 2020; Lee et al., 2022, Kim & Sue, 2024)
 - **Advantages & Challenges:** Recent work investigates both benefits and drawbacks of AI chatbots (Okonkwo & Ade-Ibijola, 2021, Jeon, 2024; Kuleto et al., 2021; Lee, 2022).
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03.

GOALS

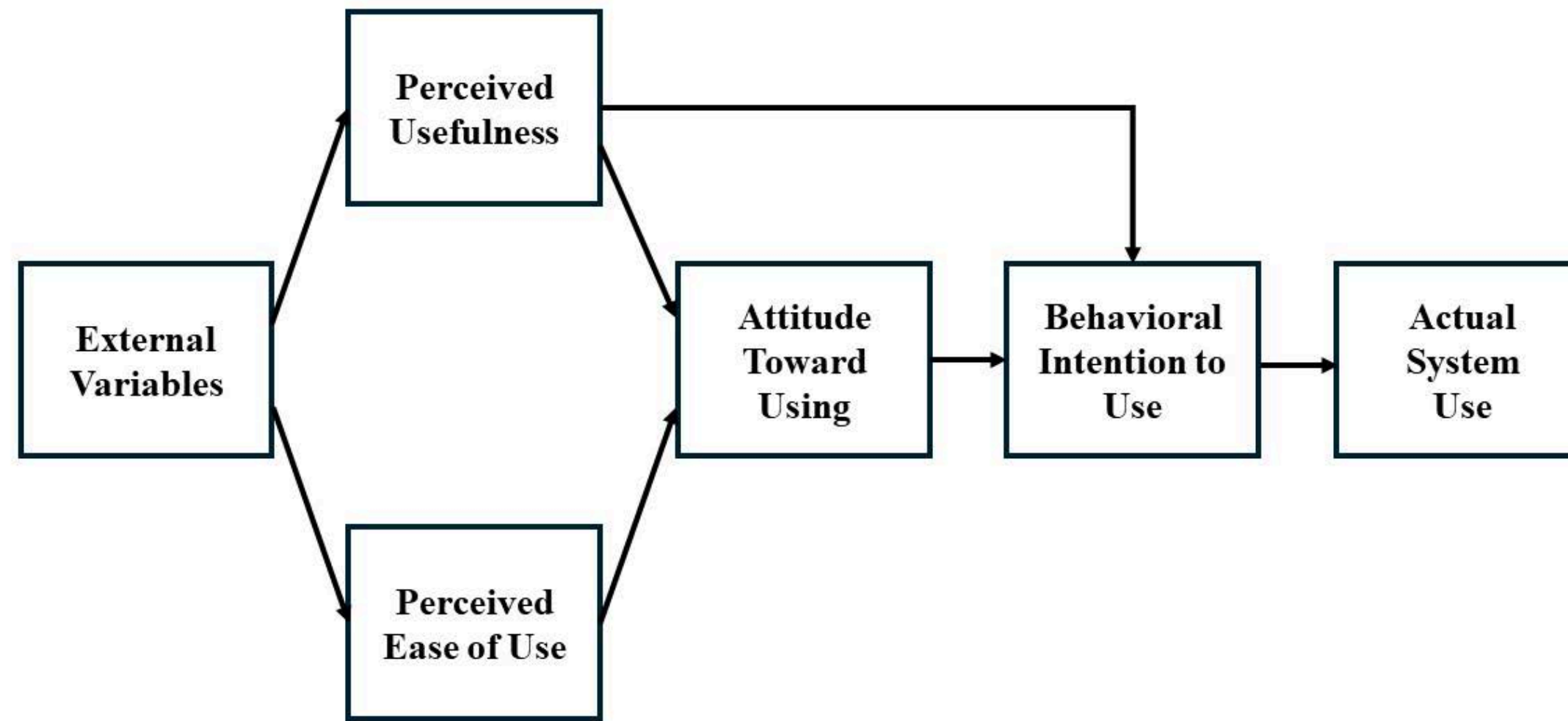
Goal: Understand L2 Students' Perceptions of AI Chatbots in Korean Speaking



- **Why it matters:** Student acceptance of chatbots impacts motivation, engagement, and learning outcomes.
- **What we're doing:** Evaluating student receptiveness and perceptions of AI chatbots using the extended version of Technology Acceptance Model (TAM2, Belda-Medina & Calvo-Ferrer, 2022).
- **Impact:** Optimizes AI integration in language learning, increases accessibility, and improves spoken Korean proficiency.

Technology Acceptance Model

- Predicts user adoption of new technologies (Davis, 1985)
- Widely applied in human-computer interaction research and language learning research (Luan & Teo, 2009; Pindeh & Suki, 2016; Al-Emran et al., 2018; Alfadda & Mahdi, 2021; Belda-Medina & Calvo-Ferrer, 2022; Hsu & Lin, 2022)



Perceived Usefulness (PU): The degree to which a user believes that the technology will improve their performance or productivity.

Perceived Ease of Use (PEU): The degree to which a user believes that the technology is easy to use and understand.

According to the TAM model, if a user perceives technology as useful and easy to use, they are more likely to:

- Form a positive attitude towards the technology
- Intend to use the technology
- Actually use the technology

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METHODS

Participants

**Sejoing AI
Tutor**

Procedures

**Data Collection
and Analysis**

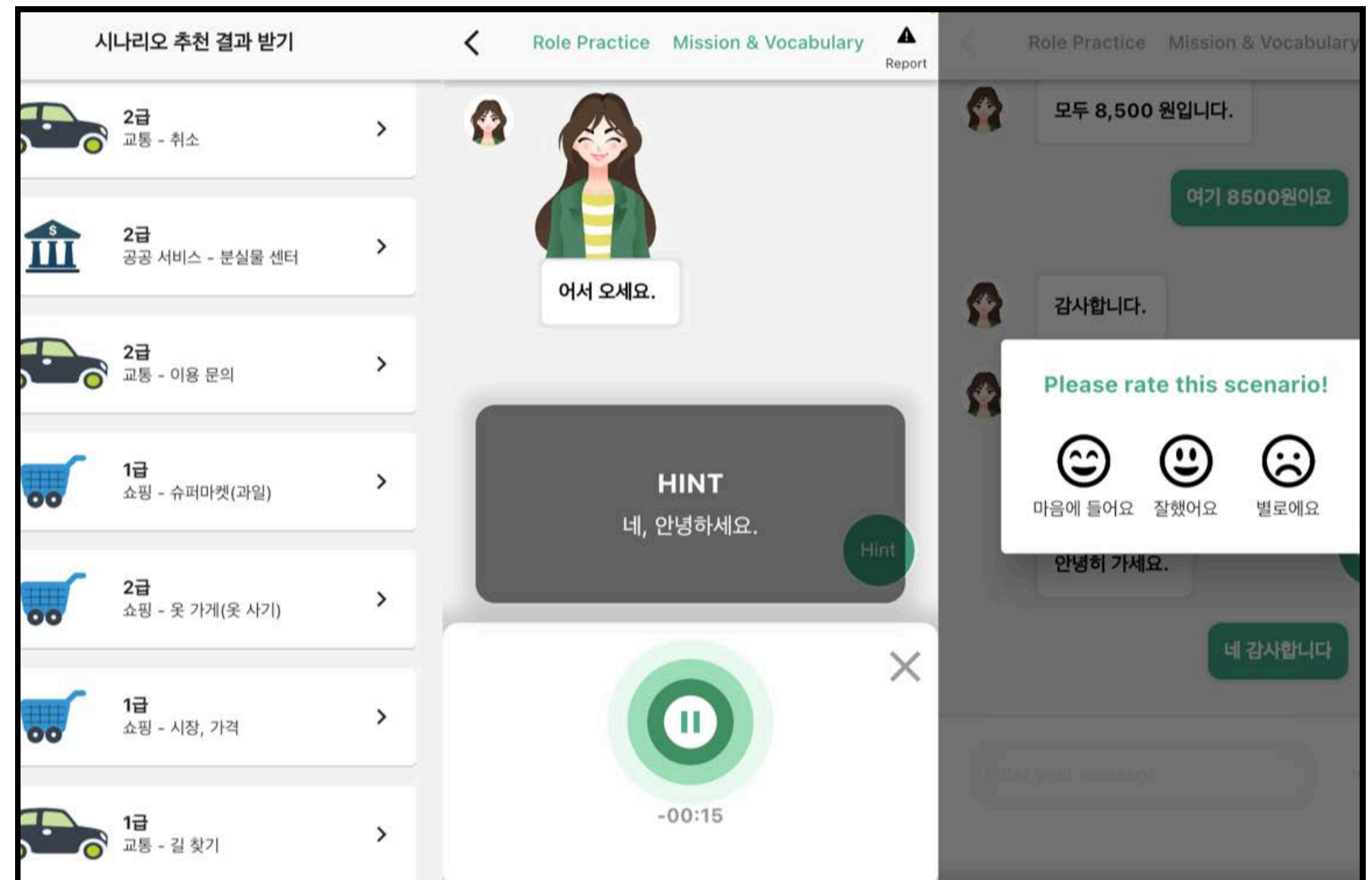
Participants

- 32 Penn State undergraduates (intermediate Korean) participated
- Average Korean experience: 20 months
- Gender: 25 female, 7 male

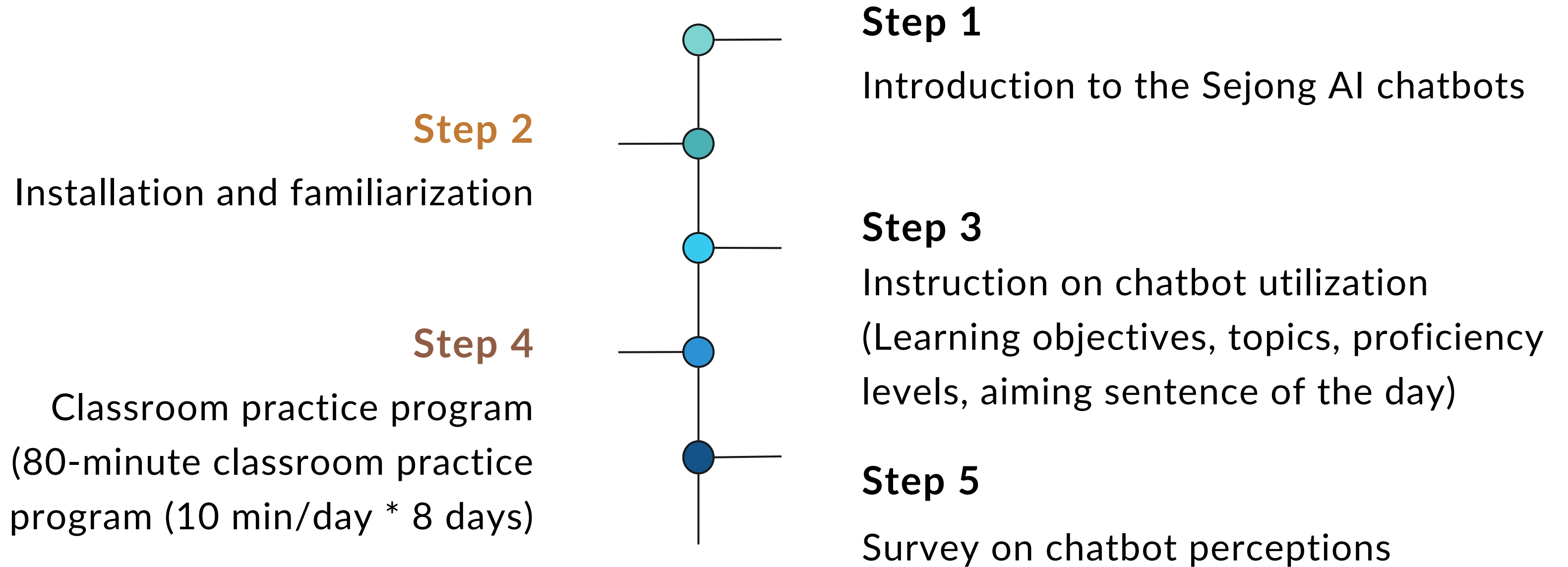


Sejong AI Tutor Application

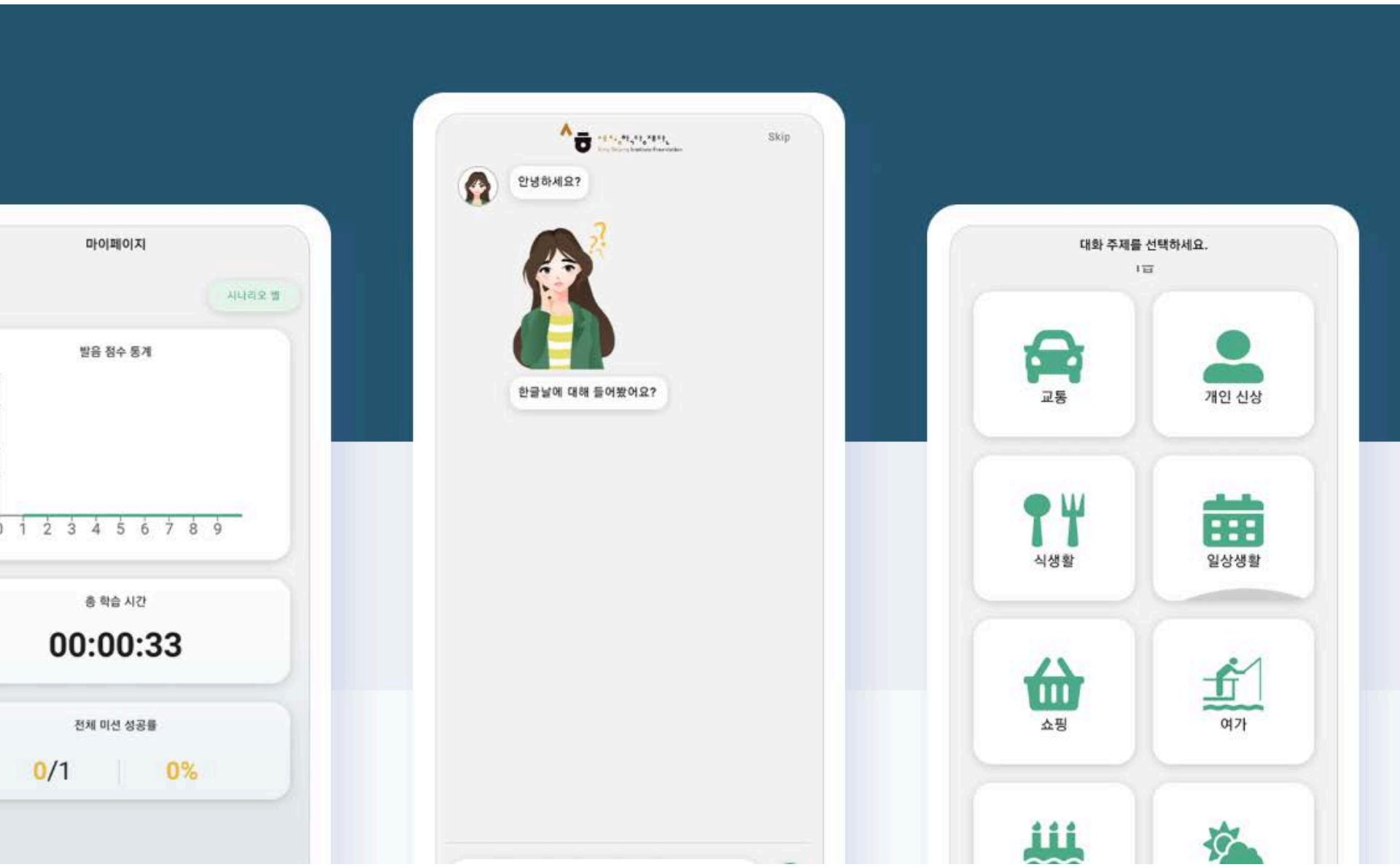
- **Scenario-based:** Emphasizes the interactive approach.
- **Practice options:** Implies students can choose activities.
- **Diverse contexts:** Highlights the variety of situations covered.
- **Korean proficiency levels:** Indicates the chatbot caters to different learning stages.



Procedures



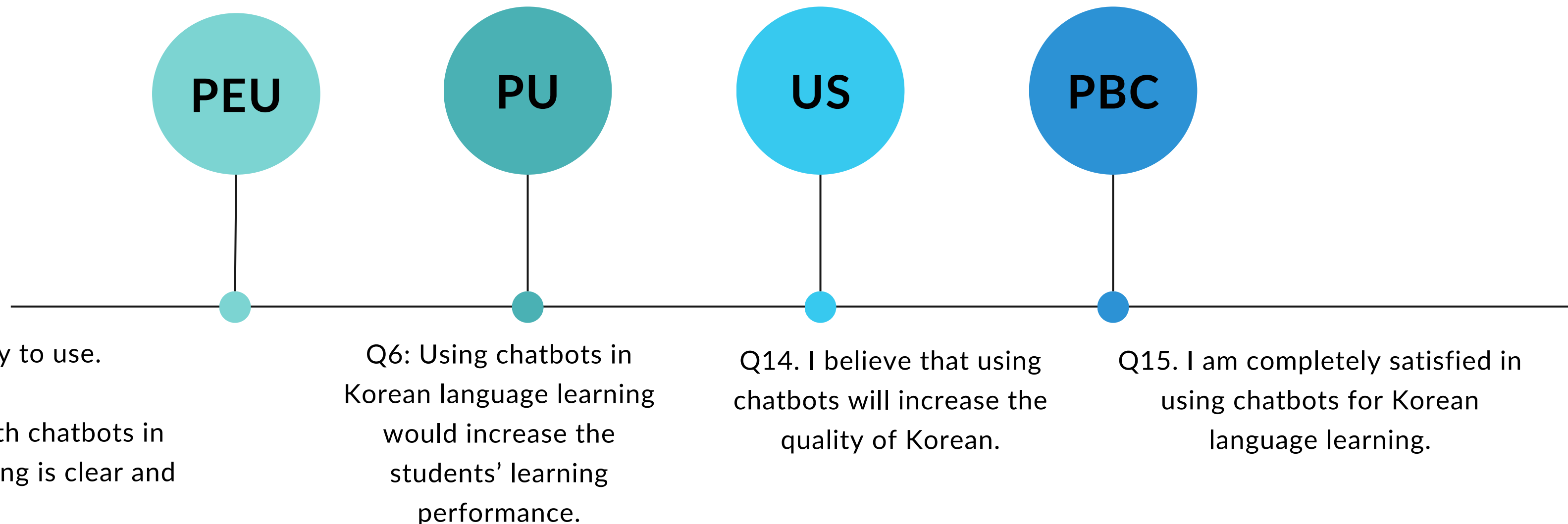
Example: Using the Sejoing AI tutor chatbot for Korean speaking practice



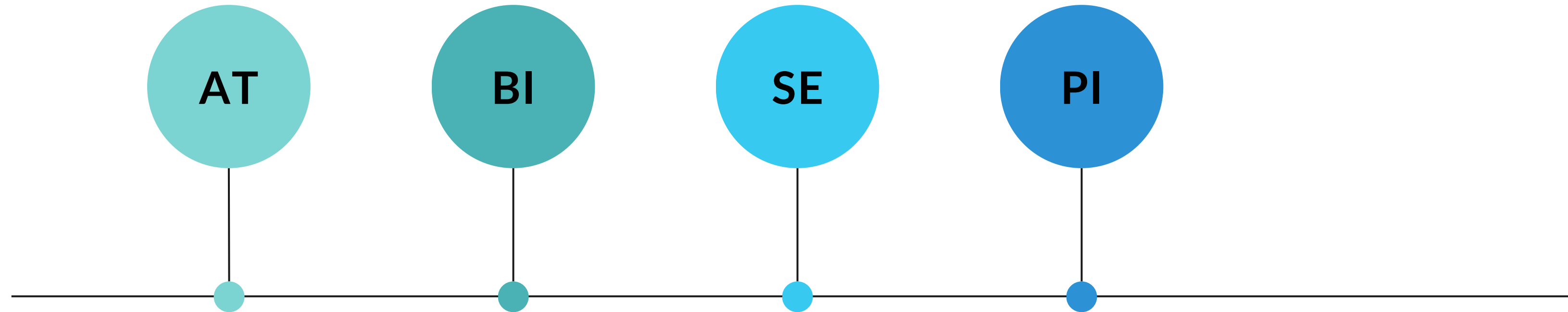
Data Collection

Mixed methods survey: 27 questions

- 25 questions (5-point Likert scale) measuring 8 TAM2 dimensions (Belda-Medina & Calvo-Ferrer, 2022): **Perceived ease of use (PEU)**, **perceived usefulness (PU)**, **usability (US)**, **perceived behavior control (PBC)**, attitude (AT), behavioral intention (BI), self-efficacy (SE), and personal innovativeness (PI)
- 2 questions: benefits/challenges



- Perceived ease of use (PEU), perceived usefulness (PU), usability (US), perceived behavior control (PBC), **attitude (AT)**, **behavioral intention (BI)**, **self-efficacy (SE)**, and **personal innovativeness (PI)**



Q18. I am positive towards using chatbots in Korean language learning.

Q19. Using chatbots in Korean language learning is fun.

Q20. I intend to use chatbots in Korean language learning frequently.

Q23. I have the necessary skills for using chatbots in Korean language learning.

Q24. I like to experiment with new technologies in Korean language learning.

Q25. Among my peers, I am usually the first to explore new technologies.

05.

RESULTS

- **Students' Perceptions of Using Chatbots in Korean Language Learning**
- **Benefits and Challenges**

Student Perception of AI Chatbot Use in Korean Language Learning

PERCEIVED EASE OF USE (PEU): 3.53

PERCEIVED USEFULNESS (PU): 3.34

BEHAVIORAL INTENTION (BI): 3.0

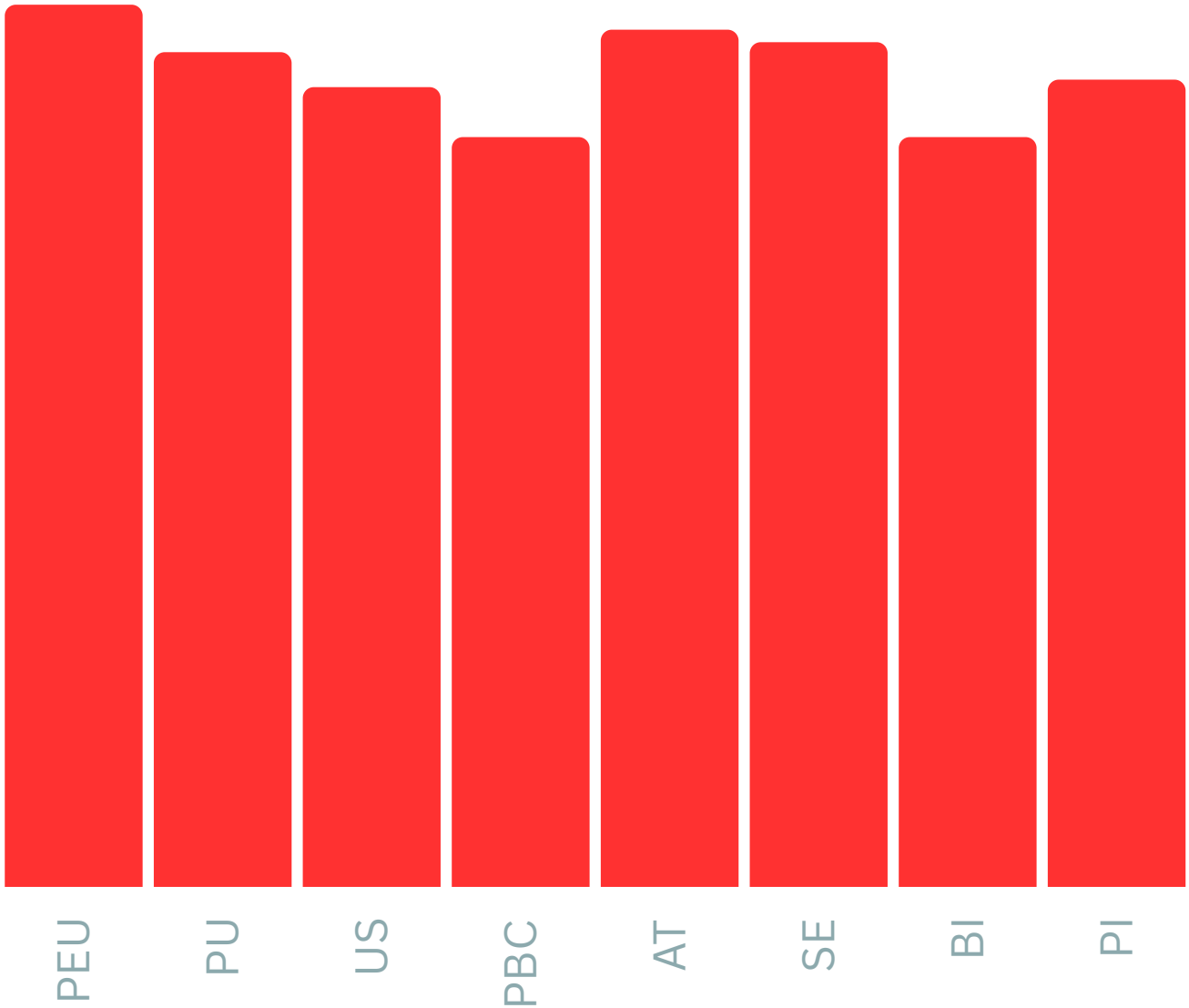
PERCEIVED BEHAVIORAL CONTROL (PBC): 3.0

ATTITUDE (AT): 3.43

SELF-EFFICACY (SE): 3.38

USABILITY (US): 3.2

PERSONAL INNOVATIVENESS (PI): 3.23



Student Perception of AI Chatbot Use in Korean Language Learning

PEU, PU, AT & SE
(High acceptance)

PI & US
(Moderate acceptance)

PBC & BI
(Low acceptance)

L2 Korean learners prefer chatbots that are:

- Easy to use & learn (PEU)
- Helpful for learning (PU)
- Enjoyable to interact with (AT)
- Effective for learning (SE)

Learner adoption increases with:

- User-friendly design
- Clear functionalities
- Positive chatbot attitudes
- Confidence in learning with chatbots

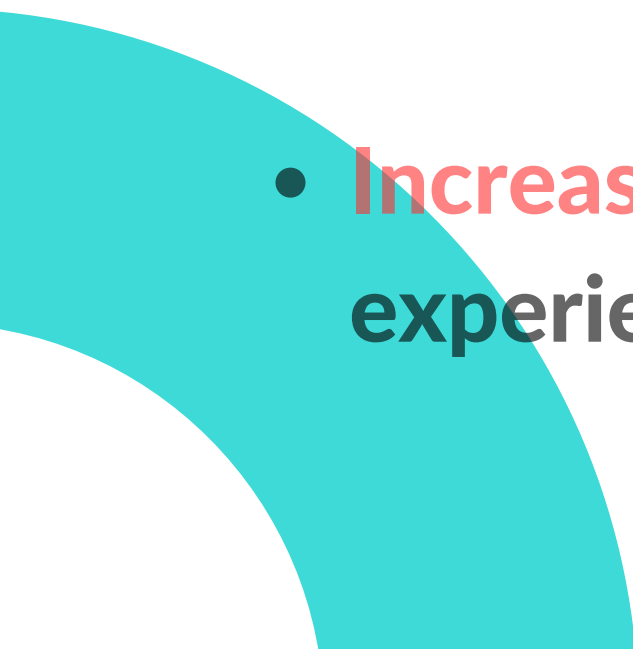
Room for improvement:

Learners receptive to new tech are more likely to accept chatbots for language learning.


Lower PBC & BI scores suggest:

- Mixed feelings about control over learning with the chatbot.
- Less frequent use intention.

Benefits of AI Chatbots for Korean Speaking Skills

- **Flexibility:** Learners can practice and improve their skills at their own pace and schedule.
 - **Reduced Anxiety:** Chatbots provide a supportive and feedback-rich environment, ideal for learners who experience anxiety in traditional classroom settings.
 - **Increased Engagement:** Interactive and real-life scenarios make the learning experience more enjoyable and potentially lead to better retention.
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Challenges of AI Chatbots for Korean Speaking Skills

- **Speech Recognition Accuracy:** Chatbots may struggle with diverse accents and dialects, leading to frustration among learners.
 - **Limited Creativity and Nuance:** Repetitive and formulaic chatbot responses can hinder language acquisition and decrease motivation.
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CONCLUSION

Conclusion

01. **Positive TAM2 results:** Students accept chatbots designed for ease of use, practical benefits, and fostering positive learning attitudes.
Room for improvement: Moderate PI/US scores and lower PBC/BI scores suggest some students and the specific chatbot used can be improved.

02. **Benefits:** enhanced flexibility, reduced language-related anxiety, and an engaging learning experience.
Challenges: Frustration arising from misunderstood speech and a perceived lack of creativity in the conversational scripts.

03. AI chatbots with improved features, combined with human interaction, can create a well-rounded learning experience for Korean language acquisition.

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**PRACTICAL SUGGESTIONS
FOR INTEGRATING AI
CHATBOTS IN KOREAN
LANGUAGE EDUCATION**

Recommendations for Integrating Chatbots in Korean Language Class

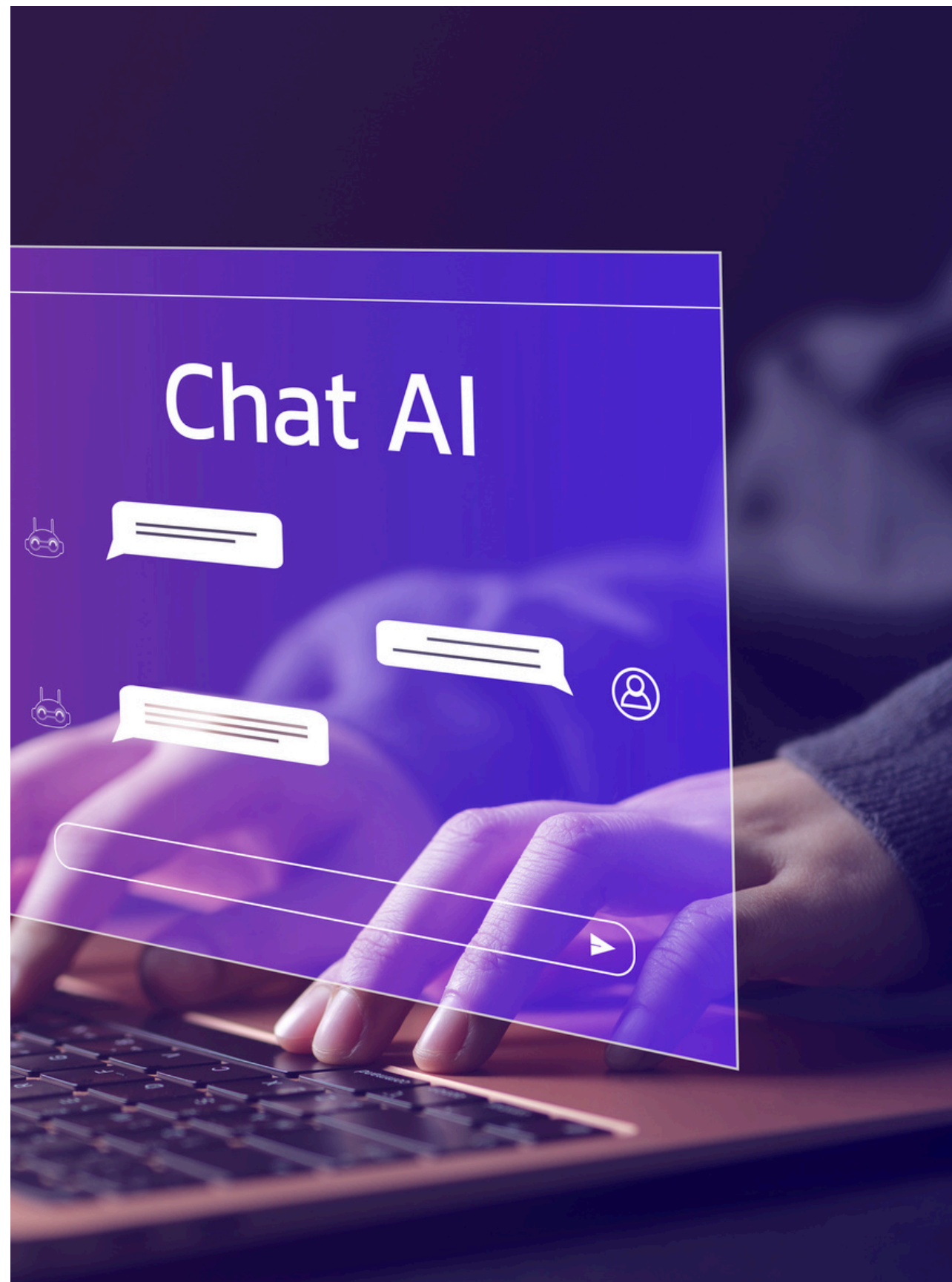
- **Focus on User-Friendliness:** Use chatbots with intuitive interfaces and clear instructions to enhance PEU.
- **Promote Self-Efficacy:** Frame chatbot interactions as opportunities for independent learning, fostering SE.
- **Highlight Practical Applications:** Integrate real-life communication scenarios (greetings, ordering food, asking directions).
- **Create Engaging Experiences:** Develop culturally relevant, enjoyable chatbot interactions.

These steps empower educators to leverage AI chatbots and create a more dynamic, student-centered learning environment for Korean language acquisition.

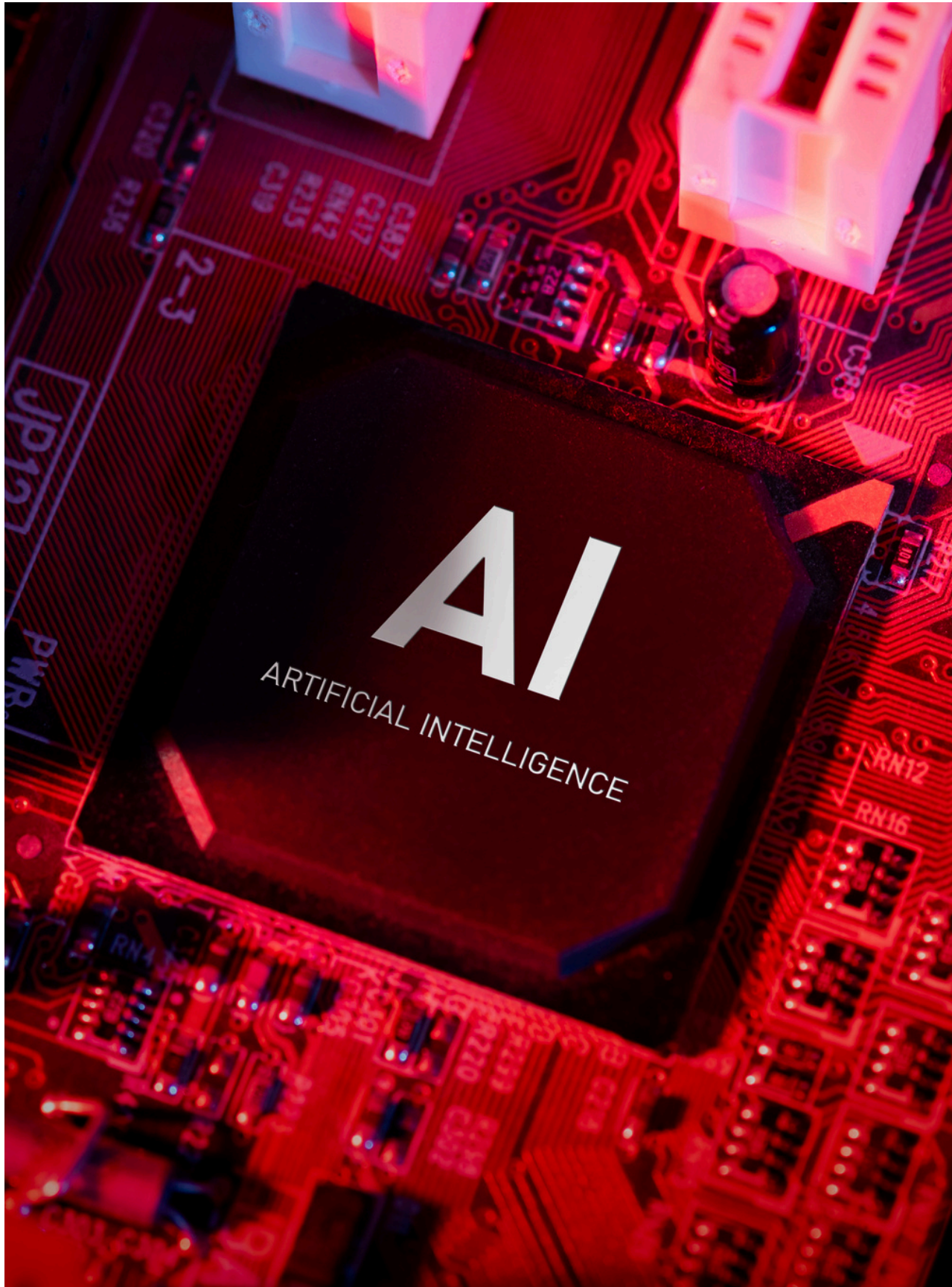
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**LIMITATIONS &
FUTURE DIRECTIONS**

Limitations



- **Single chatbot limits generalizability (future research: explore broader range)**
- **Short-term focus (2 weeks) (future research: assess long-term impact)**



Next Steps

- **AI Chatbot Comparison: Analyze user experiences (learners & instructors) with 3 chatbots (Sejong AI Tutor, Langotalk, Eggbun) to understand their effectiveness for Korean speaking across demographics.**



Korean Language Educators Needed!

ARE YOU INTERESTED IN PARTICIPATING IN A STUDY ON EDUCATORS' PERCEPTIONS OF USING AI CHATBOTS IN KOREAN LANGUAGE TEACHING?

COMPENSATION: \$120

SCAN QR CODE TO REGISTER !



THANK YOU

Have any question?

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