



Using a Chatbot to Promote Thai Students' Basic Reading Skills

- Extensive Reading Around the World (ERAW 2021)
- 13th to 15th August with workshops on 12th and 16th.
- URL: <https://eraw2021.edzil.la/>
- An online paper presentation by Janpha Thadphoothon

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ENGLISH-X

A conversation agent powered by Google's Dialogflow AI technology with the aim to promote English language teaching and learning. English-X is designed and programmed by Dr. Janpha Thadphoothon, Business English program, Dhurakij Pundit University



AIM



- To investigate the students' experience in using a rule-based chatbot (English-X) to develop their basic reading skills

Facts and Figures (Thailand)

- Thailand's population: **69.88 million in January 2021.**

Internet users in Thailand

- **48.59 million** internet users in January 2021.

Social media statistics for Thailand

- - **55.00 million** social media users in Thailand in January 2021.

- On average, Thais spent 11-12 hours per day using the Internet (about 50% of the time in a day)

Sources:

1. <https://datareportal.com/reports/digital-2021-thailand>

2. <https://www.marketingoops.com/digital-life/thailand-internet-user-behavior-2020/>

“We are already cyborgs.”

We are already cyborgs | Elon Musk | Code Conference 2016

- Recode. (2019, August 28). *We are already cyborgs | Elon Musk | Code Conference 2016*[Video]. YouTube. <https://www.youtube.com/watch?v=ZrGPuUQsDjo>



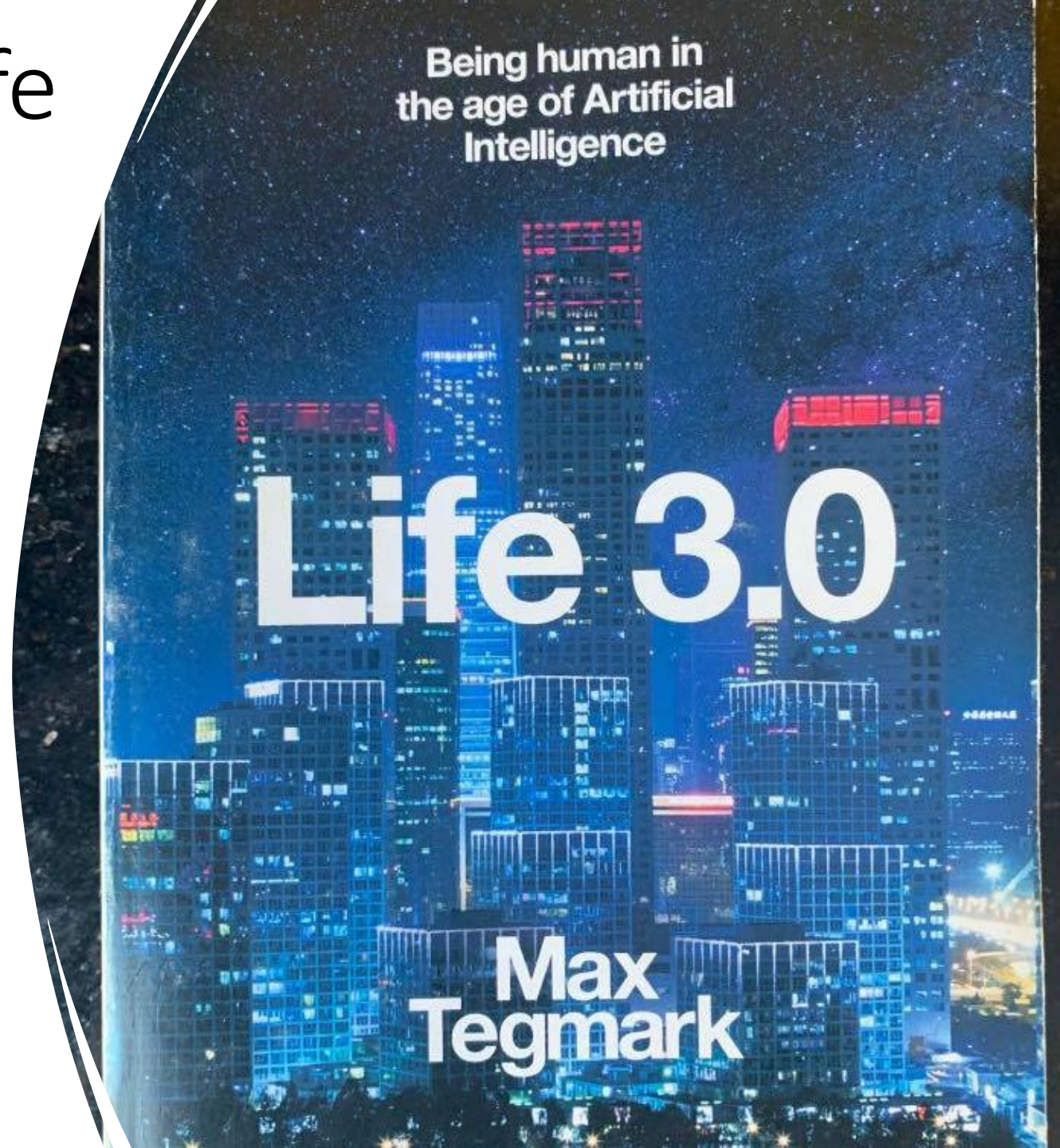
ELON MUSK
CEO OF SPACEX AND TESLA MOTORS

Three Stages of Life (3.0) by Max Tegmark (2017)

B-C-T Stages

- Tegmark, M. (2017). Life 3.0. Penguin.

“A major breakthrough in
2016”



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A chatbot for English Language Learning



Two Domains of Automatic Agents

- 1. Rule-based chatbots (e.g., English-X)

- Dialogflow by Google

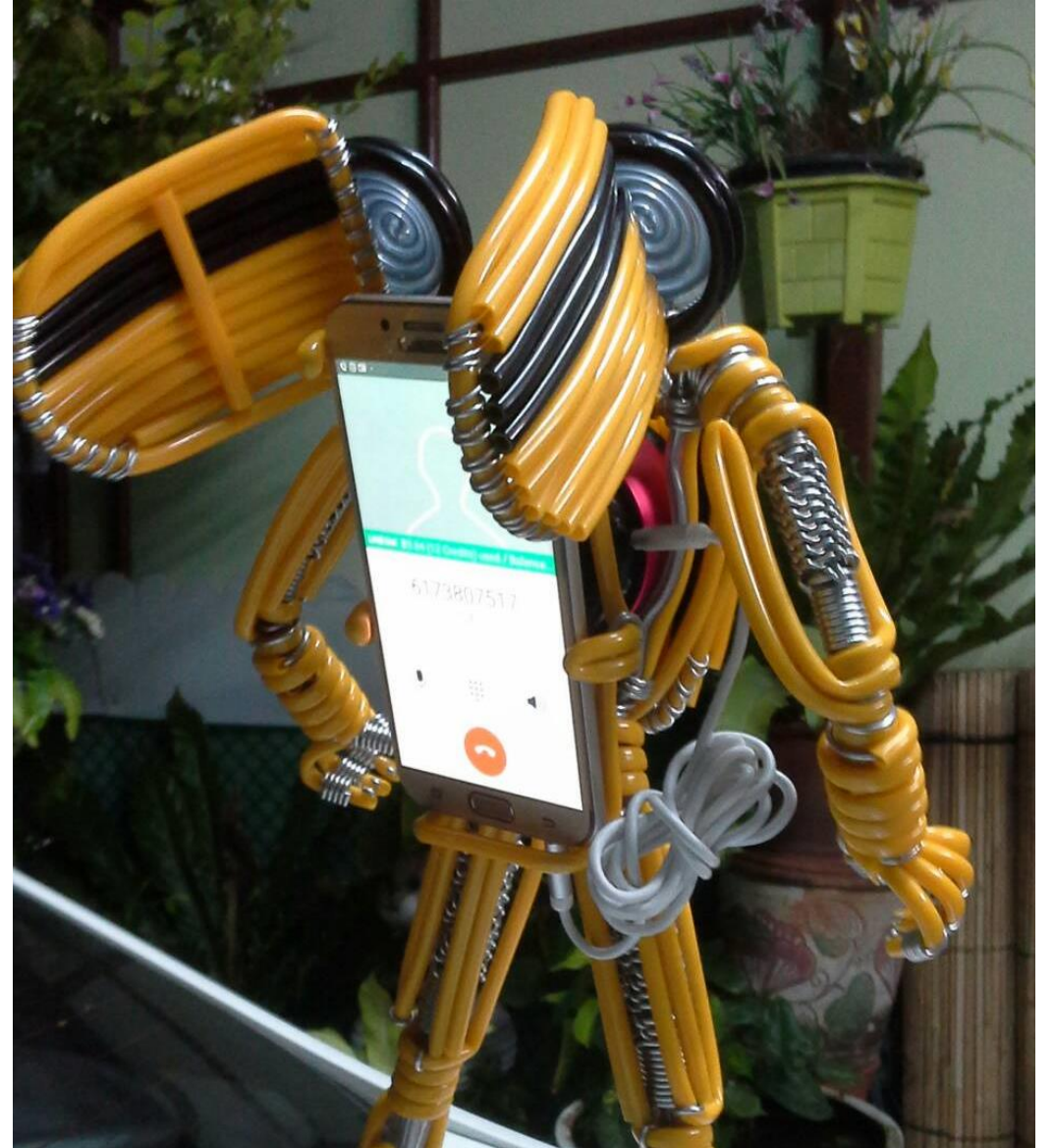


- 2. Self-learning chatbots (e.g., GPT-3 with 175 billion parameters)

- Open AI movement (Elon Musk)

“We need to democratize AI.”





How many hours a week do you spend on the internet?

- 69.2 percent of Thai people prefer to read stuff on social media (Reading survey of the TK park and National Statistical Office, 2018)



Henry David Thoreau, “Walden”

“If we live in the *Nineteenth Century*, why should we not enjoy the advantages which the *Nineteenth Century* offers?

Why should our life be in any respect provincial?”



Stories – adaptable and interactive




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POWERED BY  Dialogflow

No worries. To begin, please write or say "Ready". 

Ready

I am glad to hear that you are ready. I have three stories and one example. Do you want to listen to the first, the second, or the third story? Or, you can try the EXAMPLE. Please choose one - First, Second, Third, or Example? 

examle

Ask something...



Structure

- **Three Stories**
 1. “The Banana Farmer”
 2. “The Fisherman and the Businessman”
 3. “Love at the Riverside Restaurant”



“The Banana Farmer”

Stem

Endings – Preferences

Sad

Happy

**Own (Your
Own Ending)**

Example: “The Banana Farmer”

The first story is called “The Banana Farmer”. Ok. Let's begin. While visiting a small village along the Thai-Myanmar border province of Kanchanaburi, Thongdee helped a Karen man from going to jail. The acquitted man gave him a big plot of land. The Karen man helped Thongdee plant lots of bananas. **Now, you have THREE options: do you want the happy ending, the sad ending, OR your own ending?**

Happy Ending (3rd Story)

OK. This is the happy ending of the third story. Sam was surprised to see that the woman smiled at him. She came to greet him. They got to know each other. They got on well. Soon, love grew and they loved each other. A few months later, they got married and opened a new restaurant by the river. **If you want to listen to the whole happy story, please say "YES.."**

Previous Studies

Twenty-six students participated in this study, aiming to find out about the use of chatbots for English language learning. Ten tasks were given to each student to complete. Each was required to use their smartphone to chat with English-X. Each of them was required to write a report about their chatbot experience. The experiment was conducted in August 2020. It was found that about one-third of the students rated their experiences as 'satisfactory' and 'useful'.

Ref:

Thadphoothon, J. "Bot Chatting Experiences and Perceptions of Thai University Students". Paper presented at the 17th Annual CamTESOL Conference, themed 'Actions and Innovations in Teaching and Learning', 5 – 7 February 2021, Phnom Penh, Cambodia

Previous Studies

- The two AI groups improved their speaking performance after the experiment.
- The AI voice-chatting pairs outperformed in terms of their speaking performance task (expressing an opinion) compared with the face-to-face and AI text chatting groups.

Ref

Hea-Suk Kim, Na Young Kim, & Yoonjung Cha. (2021). "Is It Beneficial to Use AI Chatbots to Improve Learners' Speaking Performance?" in THE JOURNAL OF ASIA TEFL, Vol. 18, No. 1, Spring 2021, 161-178 DOI: <http://dx.doi.org/10.18823/asiatefl.2021.18.1.10.161>

Method

- A small school in the central region of Thailand
- **Participants** – 43 students
 - Forty-three students participated in the study (Grade-11 (20) and Grade-12 (23))
- Zoom sessions + self-learning
- Two sessions (a week-long) in June, 2021 (2 hours)
- After the intervention, students were asked to answer the online questionnaires.

Key Findings

<https://console.dialogflow.com/api-client/demo/embedded/02602223-e908-4650-a8dd-19d2caa74854>

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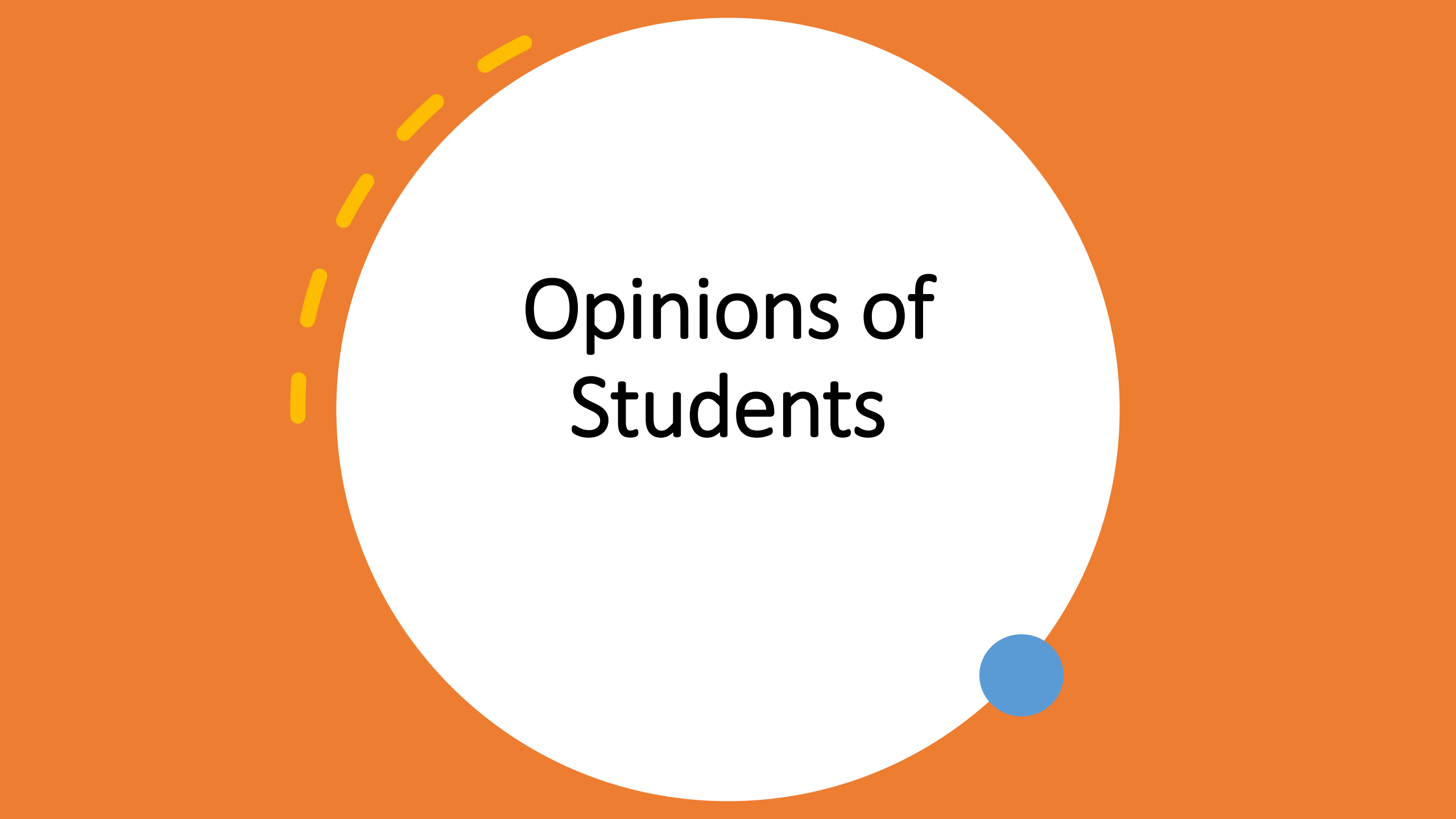


Their own Endings

While visiting a small village along the Thai-Myanmar border province of Kanchanaburi, Thongdee helped a Karen man from going to jail. The acquitted man gave him a big plot of land. The Karen man helped Thongdee plant lots of bananas. Your ending is: Thongdee and the Karen people made money from various products, from many banana plantations. Thongdee betrayed the Karen man through imprisonment and took all the produce as his own.

Students' Own Endings

While visiting a small village along the Thai-Myanmar border province of Kanchanaburi, Thongdee helped a Karen man from going to jail. The acquitted man gave him a big plot of land. The Karen man helped Thongdee plant lots of bananas. Your ending is: Karen people helped Thongdee grow a lot of bananas. Thongdee and the Karen were very wealthy and wanted to become partners in banana planting. But Thongdee disagreed. This resulted in quarrels and conflicts in the end.



Opinions of Students

How does
English-X
promote
reading?

English-X makes learning the English language
more interesting.

Respondents : 8 students

Mean: 3.8

Meaning: Agreed



How does
English-X
promote
reading?

English-X makes learning the English language
fun and enjoyable.

Respondents : 8 students

Mean: 3.9

Meaning: Agreed



How does
English-X
promote
reading?

Interactive reading with English-X makes
reading interesting.

Respondents : 8 students

Mean: 3.8

Meaning: Agreed



How does
English-h
promote
reading?

Interactive reading with English-X allows
students to learn anytime and anywhere.

Respondents : 8 students

Mean: 4.3

Meaning: Agreed



How does
English-X
promote
reading?

Interactive reading with English-X is a
convenient way of learning.

Respondents : 8 students

Mean: 4.0

Meaning: Agreed



Benefits of the System

- “It’s fun.”
- “Opportunities to practice using English – asking and answering questions”
- “More use of grammar and opportunities to practice the language”
- “You can have a chat with the agent, just like talking to native speakers.”



Any Suggestions?

- “Questions should be more engaging and fun.”



Discussions

Discussion 1 Lower- Anxiety Learning

1. Low-Anxiety Learning

English-X offers students low –anxiety environment.

English-X makes learning the English language fun and enjoyable.

It has the potential to lower the affective filter. Students have time to process the input (Krashen, 1982).

Shy students can privately practice the conversation.

Ref:

Krashen, S. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon Press



Discussion 2 Exposure

2. Exposure to Language Use

Lack of opportunities to interact with native speakers or other language users.

- “You can have a chat with the agent, just like talking to a native speaker of the language.”

Exposure to the target language use helps reduce processing time, promoting language acquisition (Ellis, 2002).

Ref:

Ellis, R. (2002). *Second Language Acquisition*. Oxford: Oxford University Press.

3. Anytime & Anywhere

Discussion 3
Perpetual
Learning

Benefits of Chatbots

In English Language
Learning & Teaching

ENGLISH-X

DPU

chatbot for English Language Learning



4. Scaffolding - Interaction

Conversation is necessary for language acquisition – conversation builds syntactic form in learning (Hatch, 1978).

Interaction serves as scaffolding (Long and Sato, 1984).

Ref:
Long, M. and Sato, C. 1984. 'Methodological issues in interlanguage studies: an interactionist perspective' in A. Davies, C. Cramer and A. Howatt (eds.) *Interlanguage*. Edinburgh: Edinburgh University Press.

Hatch, E. 1978. 'Discourse analysis and second language acquisition' in E. Hatch (ed.) *Second Language Acquisition: A Book of Readings*. Rowley, Mass.: Newbury House

Discussion 5

5. Creative Elements

Students are given opportunities to construct their own stories. Their autonomy / agency is enhanced.

New stories - narratives



Moral Issues / Big Questions

Chatbots (AI) may
dehumanize us
humans.

Access and equity

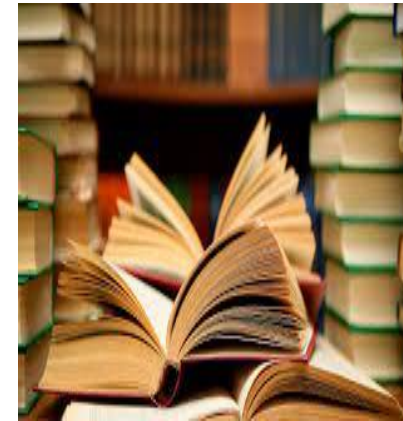
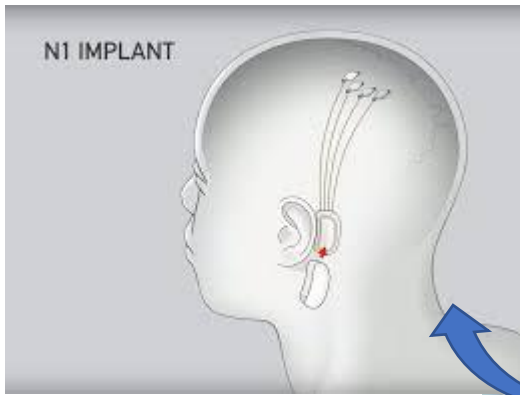
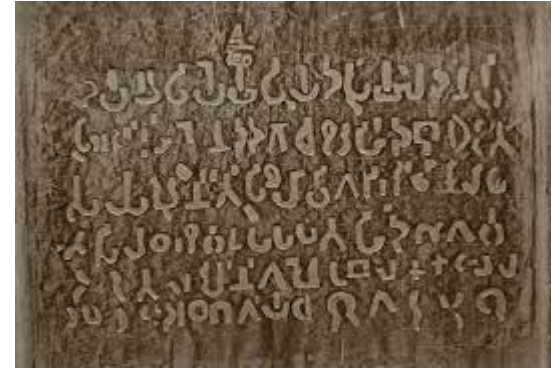
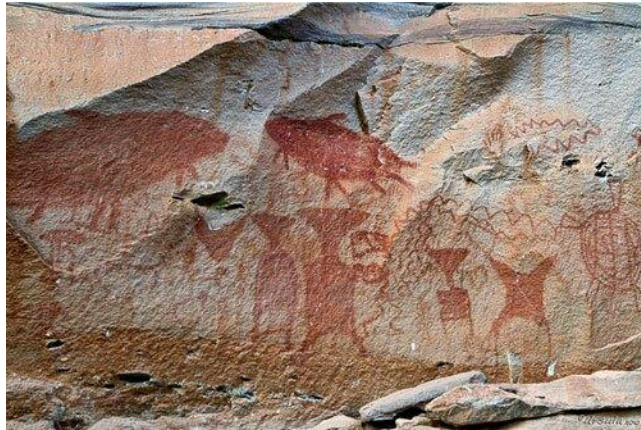
Summary of Discussions

- 1. Low-anxiety Learning
- 2. Exposure
- 3. Convenience (Anytime and Anywhere)
- 4. Scaffolding (Reading + Conversation)
- 5. Creativity in Action



AI will transform human society. In fact, it is happening!

Personal Reflection



Any questions or comments?

Please cite as:

- Thadphoothon, J. “Using a Chatbot to Promote Thai Students' Basic Reading Skills”. Paper presented at The Extensive Reading Around the World (ERAW 2021), 13th to 15th August 2021. (Online Conference)

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