

New Teacher Leadership in the Age of AI

Session: Teacher-Led AI Pedagogy and Learning Design

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Overview

Intro | The Teacher as Pilot

Part 1 | The Pros and Cons of Digital Life

Part 2 | New Teacher Leadership and Roles

Part 3 | Teacher-Led Learning Design

Closing | The Controls Are in Our Hands

Introducti

The Teacher as Pilot



Attention Passengers:

**This flight is now operated
entirely by AI autopilot.**

Relax and enjoy the journey with our advanced system.

Safe Travels | Flight [AI 302] | Altitude (37,000 ft)

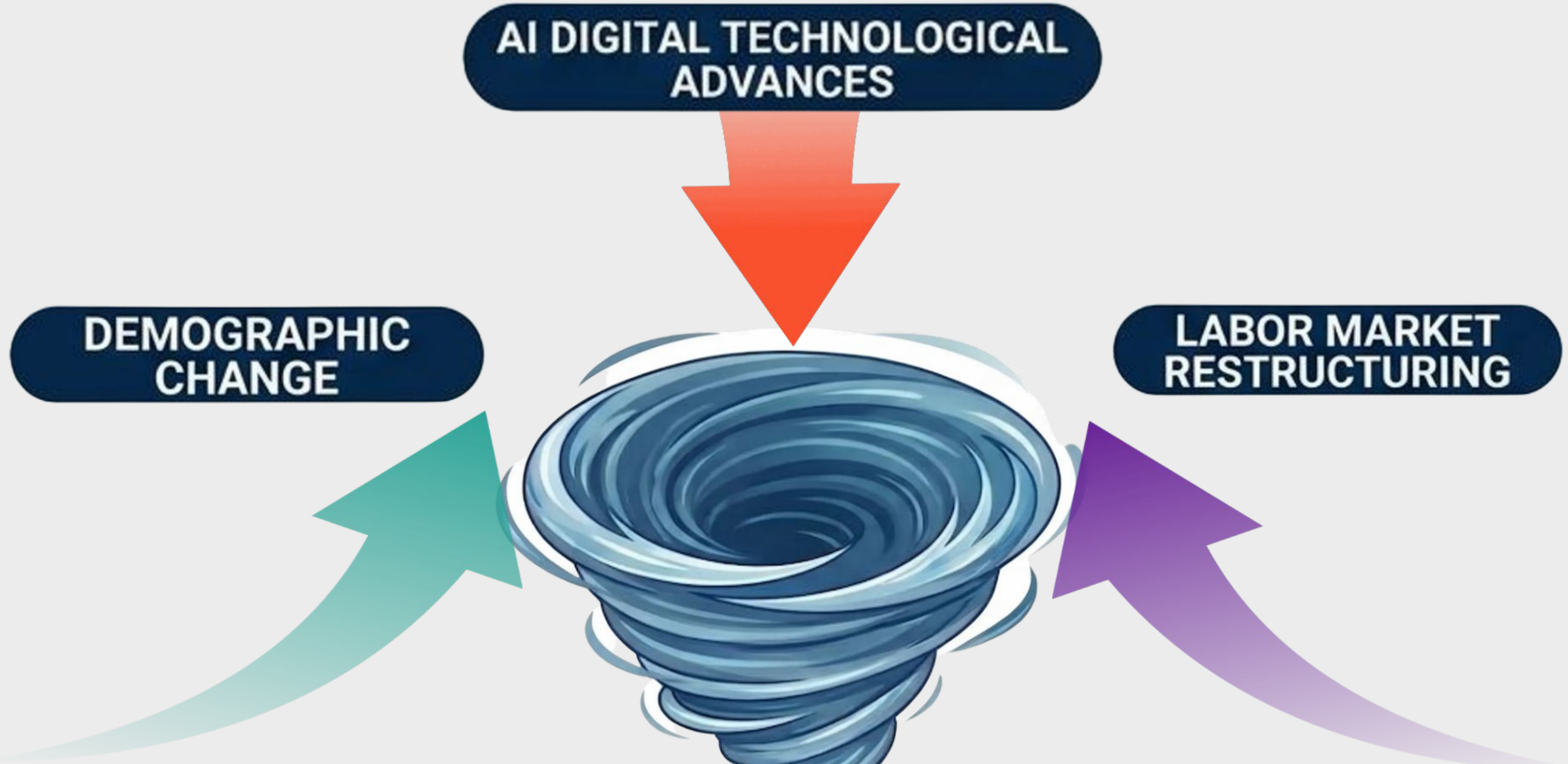
AIR | AILE



Who is holding the controls?



Three Big Changes in Education



*The teacher must be
the Captain.*

*Not
a passenger*



*Not
a crew member*

Part 1

The Pros and Cons of Digital Life

What Convenience Hides



Noise Cancellation

Social Disconnection

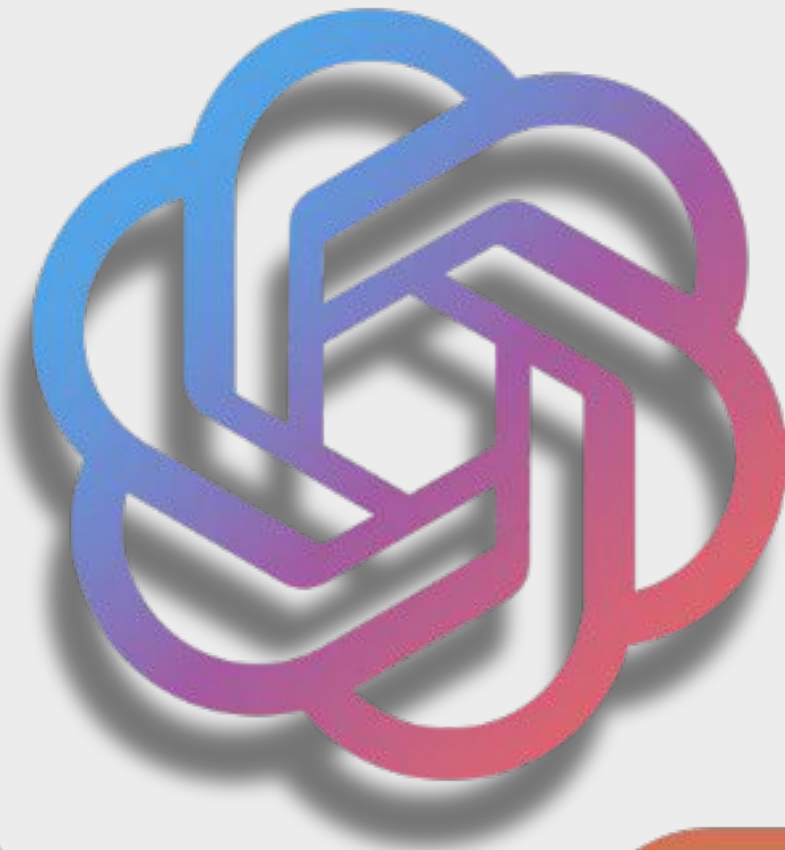
What Convenience Hides

Expansion of
Indirect Experience

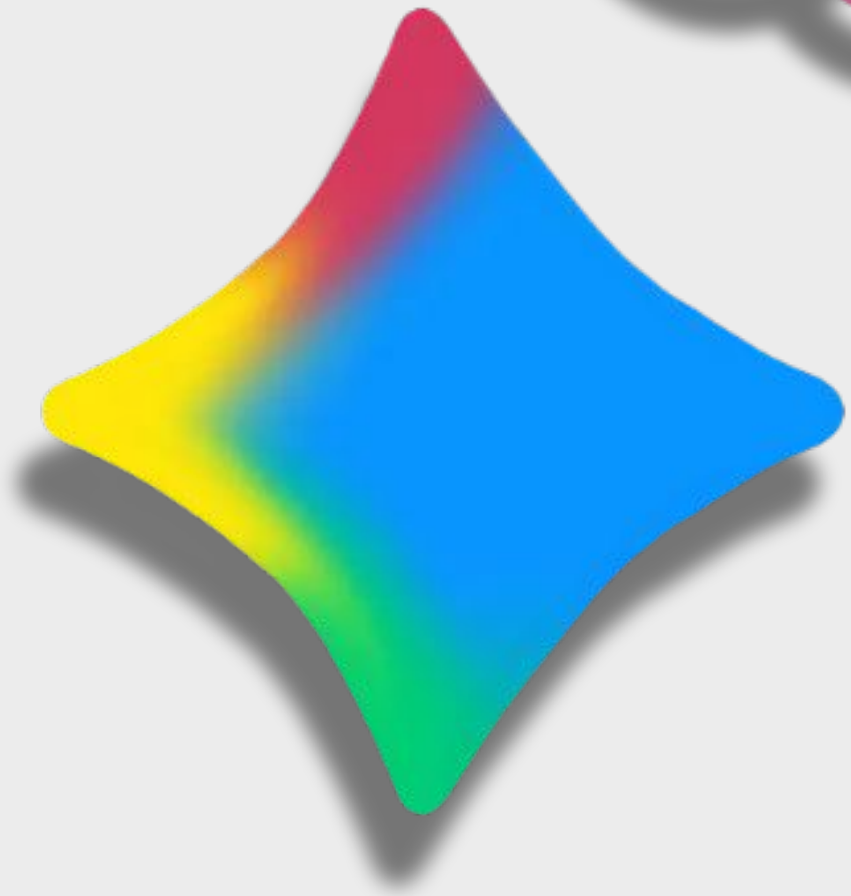
*Loss of
Direct Experience*



What Convenience Hides



Instant Answers



Loss of Reflection

What Convenience Hides

Precise Preferences

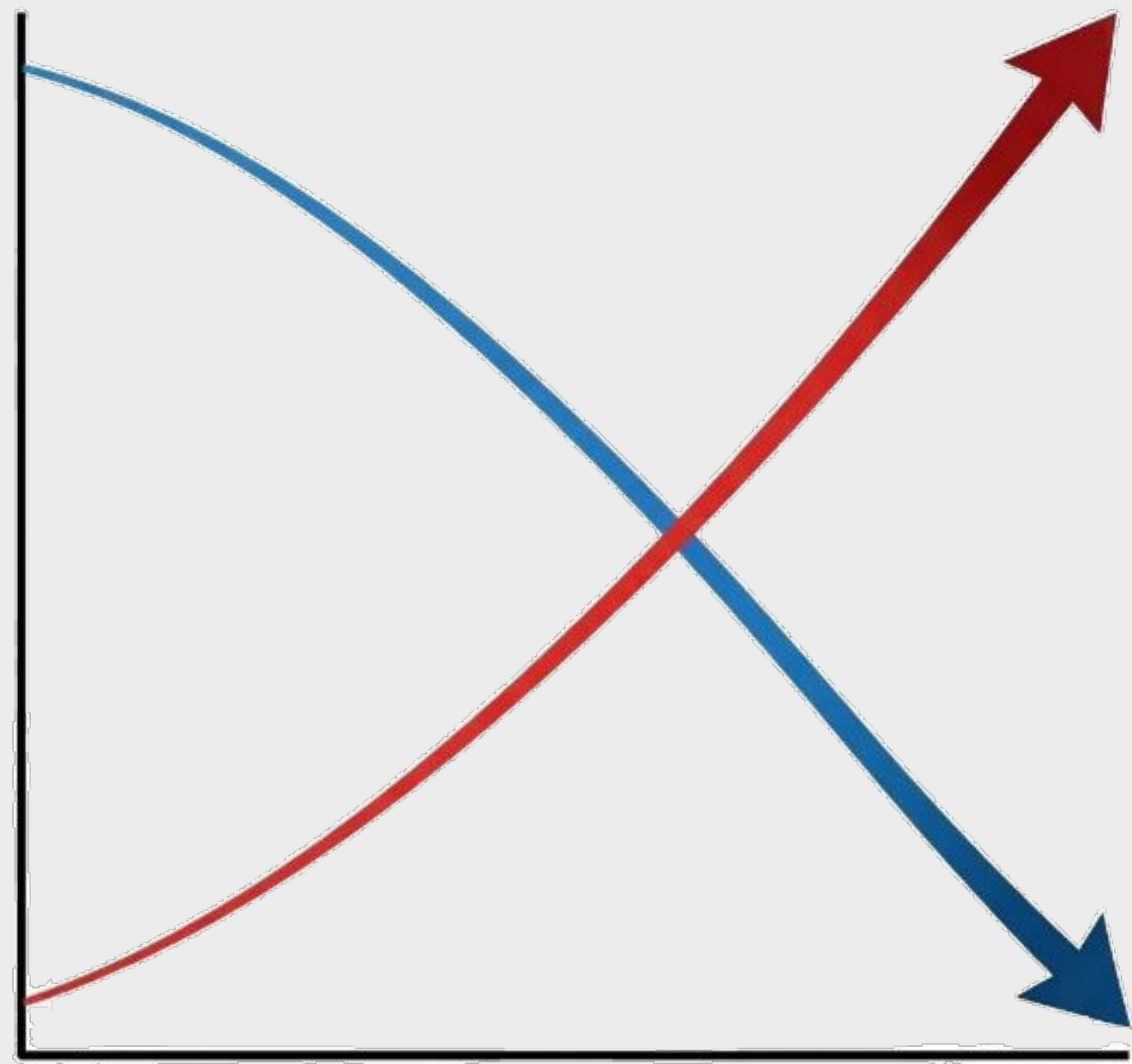
Limited Exploration



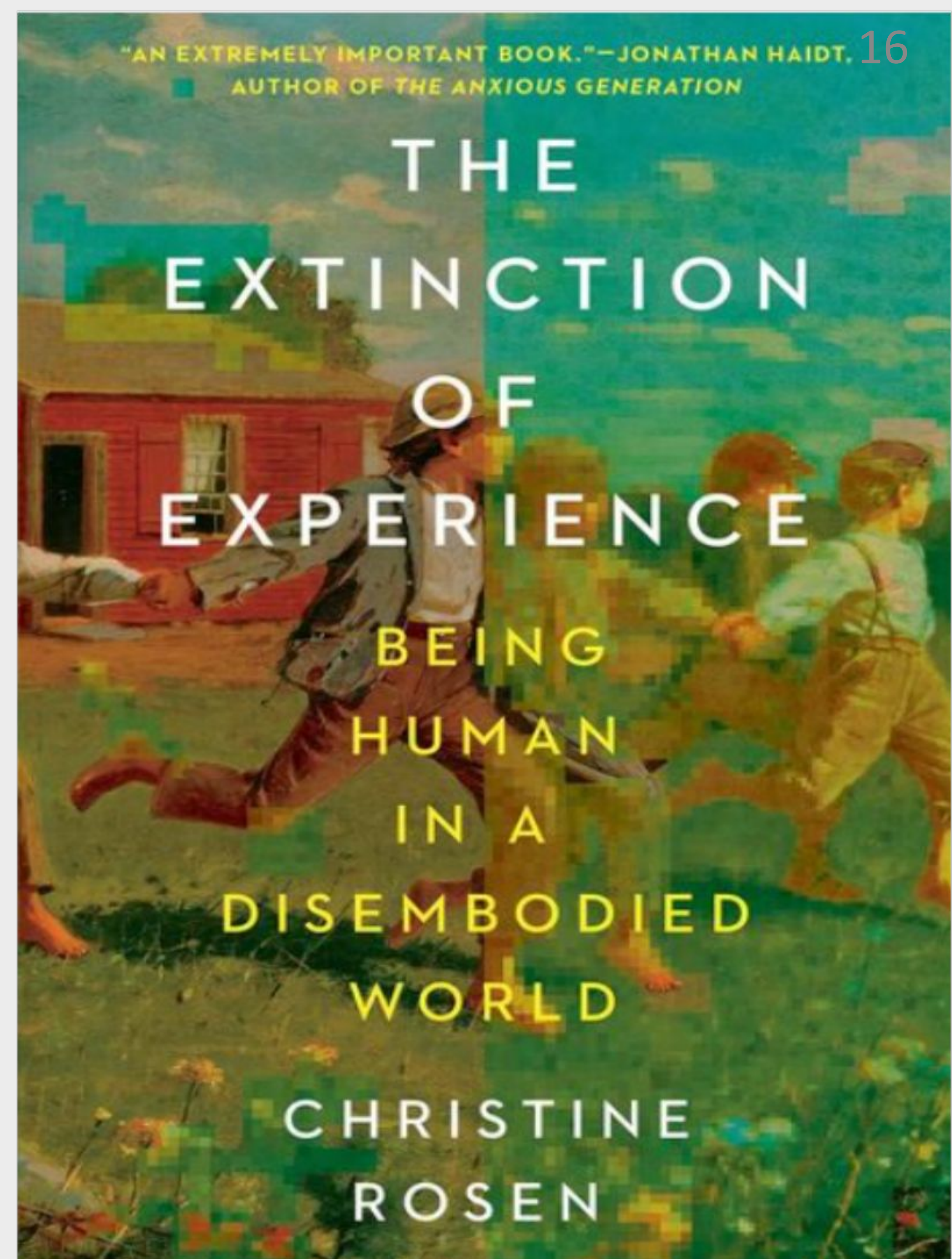


Inconvenience

More Indirect Experience



Less Direct Experience



TECHNOLOGY



Education

The Paradox of Automation

Ideal Vision (Repetitive Work Automated)



-  Focus on relationships & mentoring
-  Nurture student creativity
-  Deepen connections

※ OECD 2030 Learning Compass:
 “**Student agency** presupposes **teacher agency**.”

Potential Reality (Managed Instruction)



-  • Following platform guidance
- Goals not self-set
- Lessons not self-designed

What AI Cannot Do Instead of Us



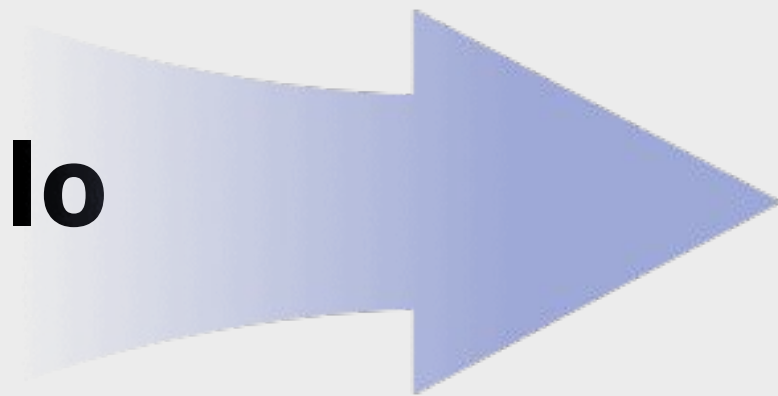
**Class
Size**



**Technolo
gy**



**Parental
Backgrou
nd**



The Teacher



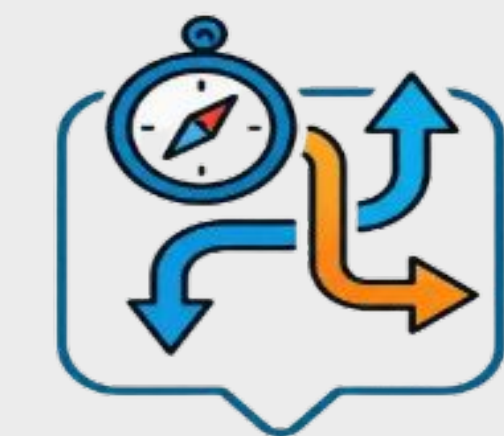
**Formative
Assessme
nts**



**Build
Relationshi
ps**



**Set
High
Expectations**



**Adapt
Instruction
in Real-Time**

What AI Cannot Do Instead of Us

What AI is Good At

- Quickly analyzing metrics
- Quickly generating activities
- Following established rules consistently
- Delivering feedback in a fixed format

What Only the Teacher Can Do

- Understanding the real situation
- Reshaping activities to fit
- Judging in unexpected situations
- Building trust and emotional support

Three Warnings

1

'Just Do What AI Says' Pattern

Accepting AI recommendations without understanding why
→ teacher becomes an operator, not a designer

2

Data Overriding the Teacher's Judgment

Teachers' judgment about student needs gradually handed over
to dashboards and automation

3

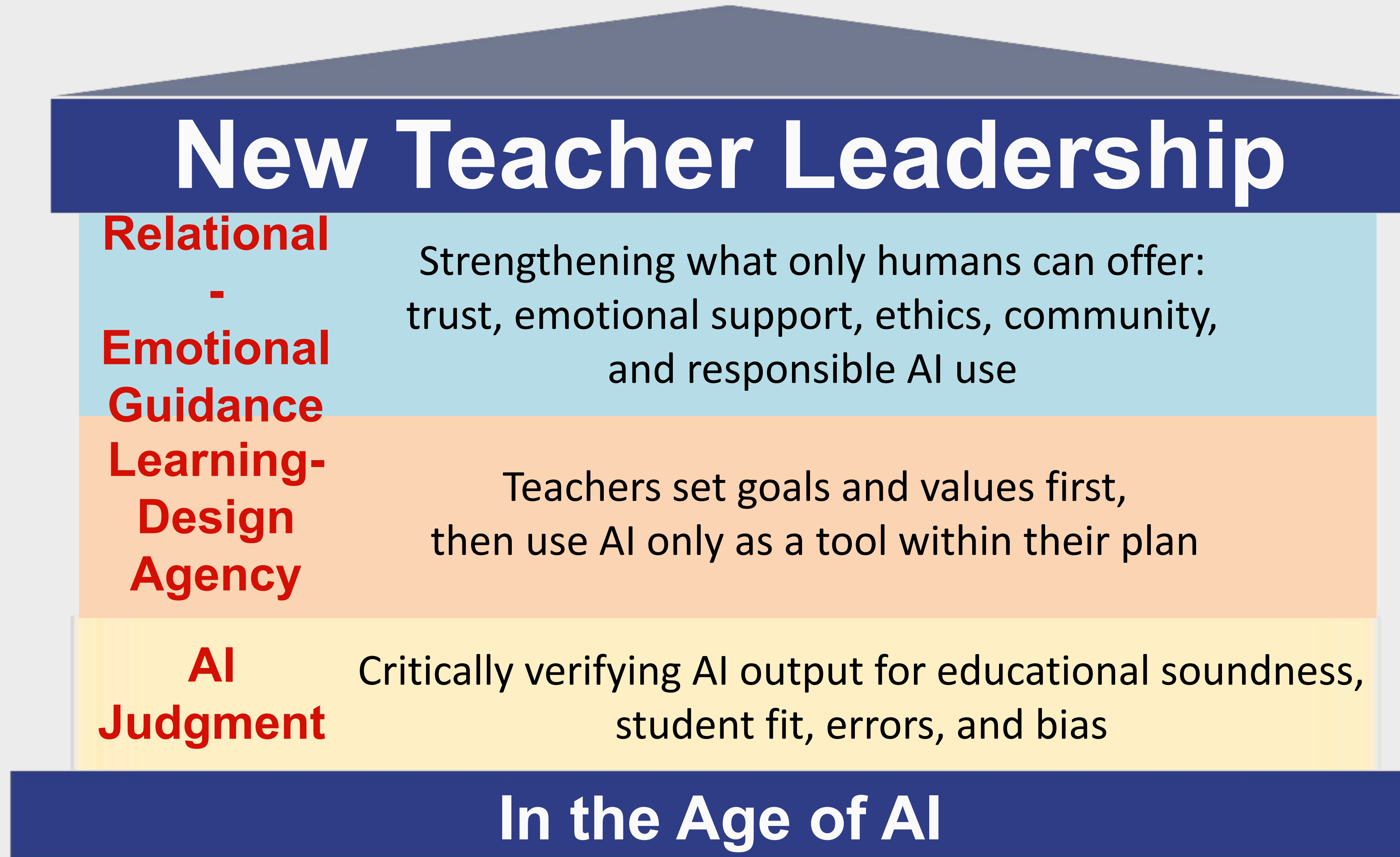
Outsourcing Lesson Design

AI-generated lessons distance teachers from design,
weakening professional identity and creativity

Part

New Teacher Leadership and Roles

The Three Pillars of New Teacher Leadership



Teacher's Insight and Discernment



The Same Mission



The Same Fridge



Different Dishes

Part

Teacher–Led Learning Design

Teacher as Learning Designer

Choose

What tool fits this activity?

Selecting the right tool based on students' level, readiness, and learning goals

Connect

How does this AI output link to other subjects?

Using AI only when it truly connects to the subject and learning content, not just because it's available

Cut

When should AI stop and the work go back to the student?

Deciding when to stop AI so students keep the experience of thinking and doing for themselves

Lesson Design

27

Class Overview

- ✓ Title: **Making AI Laws for a Better Society**
- ✓ Topic: **Exploring ethical issues in AI and solutions**
- ✓ Target Grade: **5th Grade** Elementary School
- ✓ Subjects: **Social Studies, Ethics, Korean Language**
- ✓ AI, EdTech: **Mizou, Brisk Teaching**

 Connect

 Choose

3 Keywords

*# cognitive outsourcing,
self-directed collaboration,
use of customized chatbots*

Teacher-Led Lesson Design

Design Intent

To help students grow in critical thinking and ethical awareness through student-led inquiry

Core Principles

Using AI as a support for thinking and judgment, rather than relying on it

Key Points of This Lesson

Core Student Experience

The experience of exploring topics on their own initiative, treating AI as a partner rather than depending on it

Distinctive feature of this lesson

A "visible thinking" strategy, an AI chatbot designed by the teacher with a clear educational purpose

Lesson Flow

Inquiry Question: How can we use AI responsibly?

Session	Main Content
1~2	Activate Knowledge Creating an AI KWH Chart
3~7	Explore & Understand Understanding AI (Meaning, Functions, Principles, etc.)
8~9	Active Inquiry Exploring various social problems caused by AI (feat. Mizou)
10~14	Creative Problem Solving Creating laws to solve problems caused by AI (Mock Lawmaking)
15~20	Extend & Transfer Making posters promoting the right use of AI / Writing about AI (feat. Brisk teaching) / Project reflection



Lesson in Practice

K 인공

W 지능

H How

Know

- 우리가 어려워 하는 걸 도와준다.
- 우리는 지금 AI 단계에 있고 AGI 단계로 올라가고 있다.
- AI는 우리에게 나쁜 영향을 미치기도 한다.

Wonder

- 인공지능은 누가 언제 만들었을까?
- 우리 미래는 AI에게 지배를 당했을까?
- 왜 사람들은 AI가 나중에 우리를 지배할 수도 있다는 걸 알지만 왜 계속 개발할까?

How

- AI 관련 영상 시청
- 인터넷에서 관련 자료 찾아보기
- AI 설계도 만들기
- AI 창시자와 가상 인터뷰 해보기

팀원: [Blank space for names]

파워레이저

K Know

W Wonder

H How

차트

Know

- 사람들이 어려워 하는 것을 도와준다.
- 인공지능은 점점 진화하고 있다.
- 인공지능은 우리가 하기 힘든 일을 대신할 수 있다.

Wonder

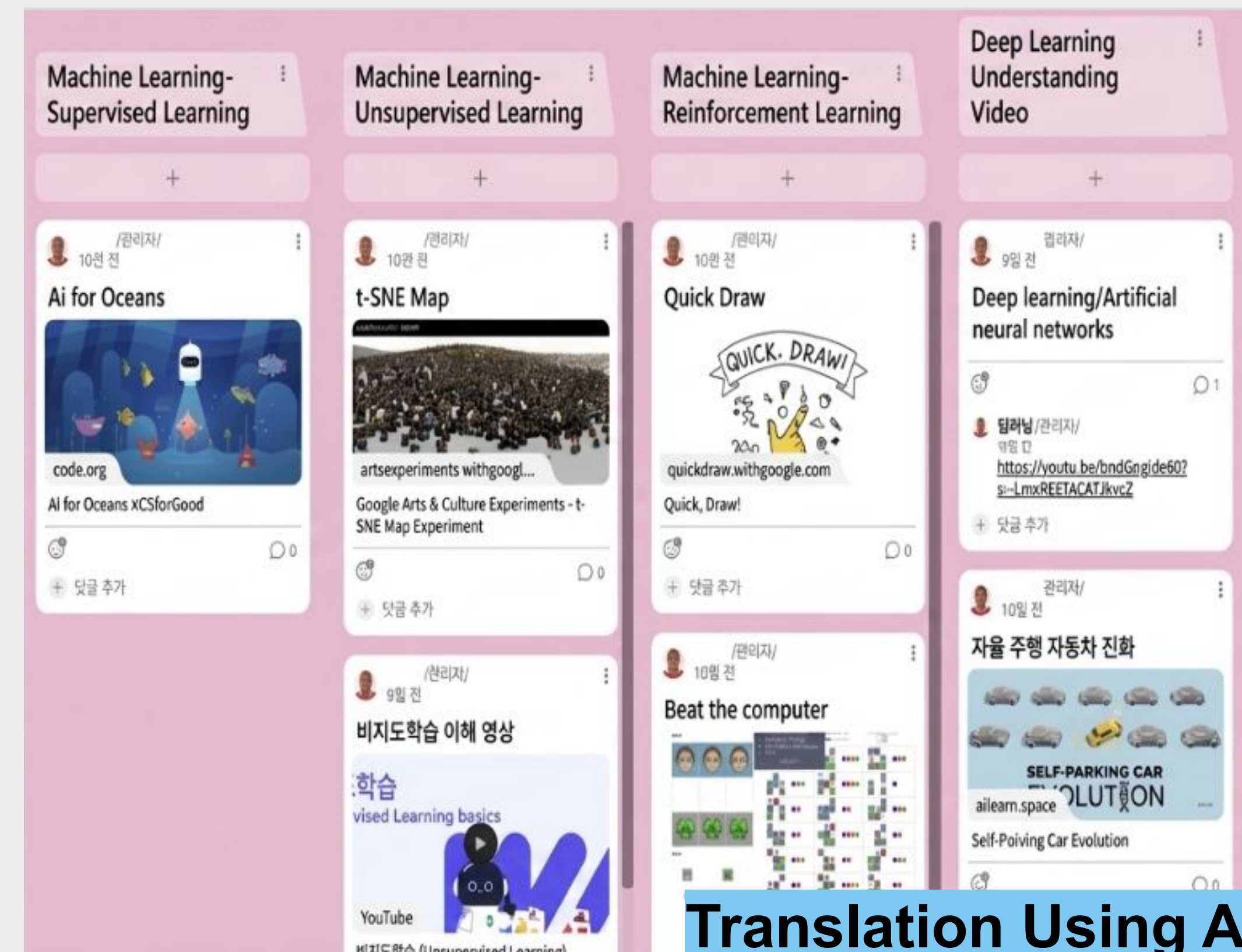
- AI에 데이터를 어떻게 학습하는 걸까?
- AI는 감정이 있을까?
- 어떤 이유로 AI가 만들어졌을까?
- 미래의 AI는 할 수 있는 일이 많아져 사람을 지배할까?

How

- AI에 과거, 현재, 미래를 비교하는 신문 만들기
- 인터넷으로 AI가 어떤 이유로 만들어졌는지 찾아보기
- 책으로 AI에게 감정이 있는지 찾아보기

Session 1~2) Creating an AI KWH Chart
(Know-Wonder-How)

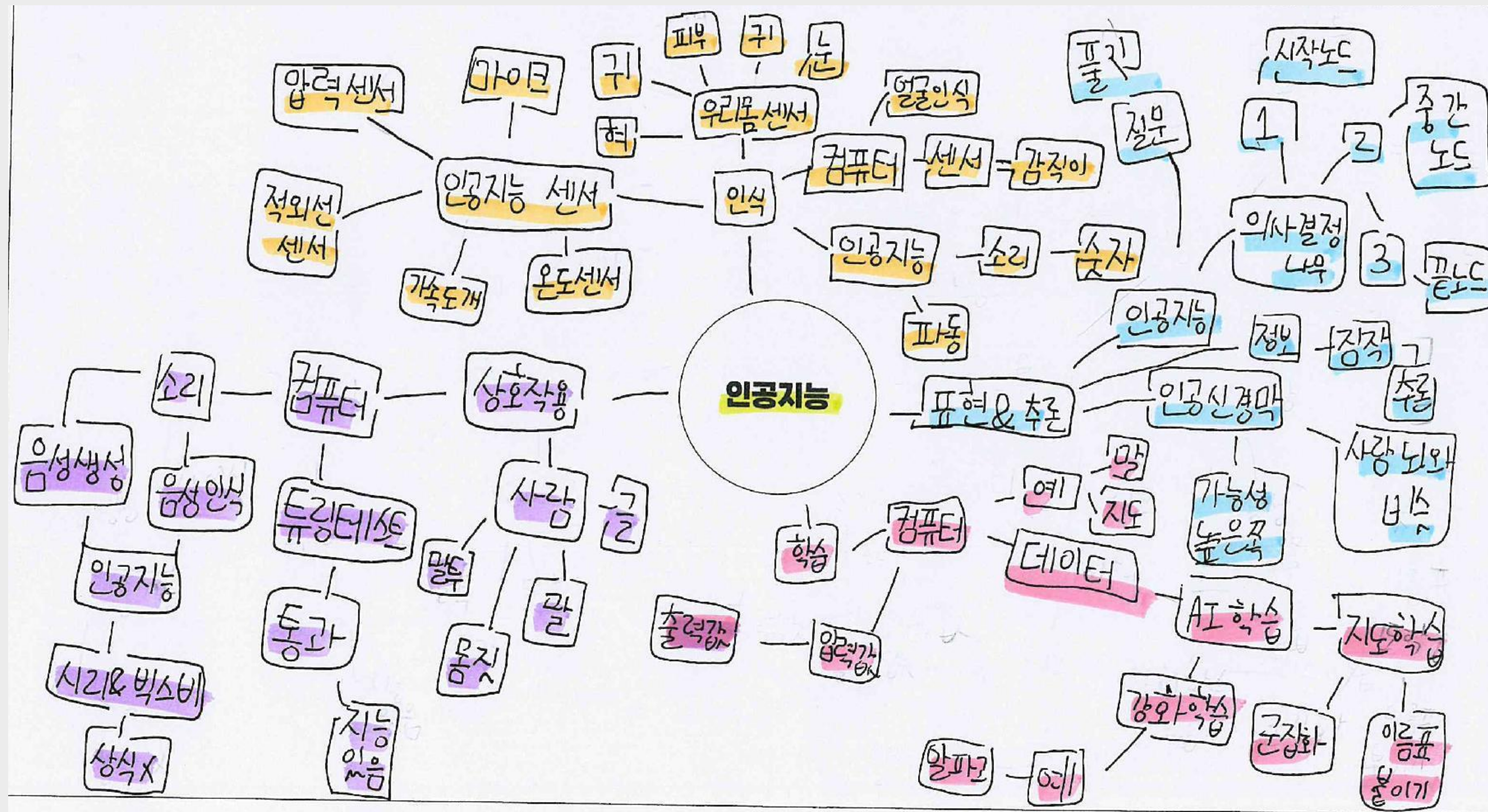
Lesson in Practice



Translation Using AI

Session 3~7) Understanding AI
(Meaning, Functions, Principles, etc.)

Lesson in Practice

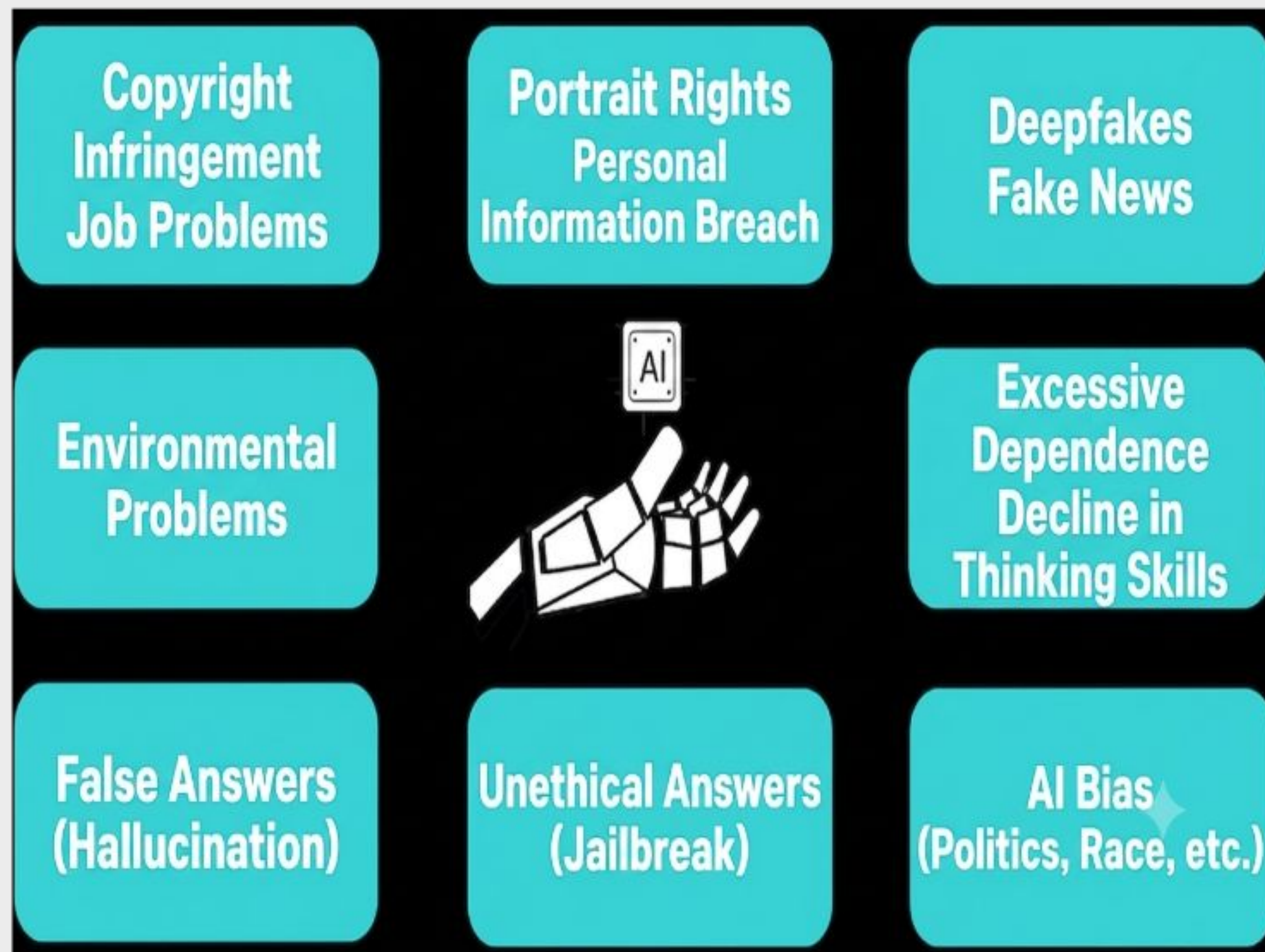


Visible Thinking
Strategy
through
AI Mind Mapping

Session 3~7) Understanding AI

(Meaning, Functions, Principles, etc.)

Lesson in Practice



Environmental Issues (Group 1)	False, Unethical, Biased Answers (Group 2)	Excessive Reliance on AI, Reduced Thinking Ability (Group 3)	Copyright, Job, Economic Issues (Group 4)	Deepfakes, Fake News, Phishing Crimes (Group 5)
<p>이승현 11일 전</p> <p>환경 문제 때문에 어떤 문제가 생길까?</p> <p>데이터 센터가 많이 할 때 전기가 많이 필요하고, 이 전기가 석탄 같은 화석연료에서 나오면 공기가 더러워지고 기후 변화가 심해지고, 이렇게 되면 동물들도 집을 잃고 사람들도 건강에 나쁜 영향을 받을 수 있다.</p> <p>출처:인공지능 사회적 문제 첫번째</p>	<p>김동준 11일 전</p> <p>인공지능을 활용한 서비스의 장점</p> <p>인공지능의 활용에 따른 장점은 빠르고 정확한 정보처리 능력, 24시간 운영 가능, 인간의 감정을 이해하지 않고 일관된 태도를 유지한다는 점이다. 그러나 개인정보 침해, 일자리 감소, 편향된 정보 제공, 알고리즘 차별, 책임 소재 불분명 등 부작용도 있다.</p> <p>출처:인공지능의 사회적 영향</p>	<p>조연호 11일 전</p> <p>ai에 대한 지나친 의존의 문제</p> <p>AI가 똑똑해질수록 길들여지는 인간... 지능 퇴화할 수도</p> <p>인공지능(AI)에 머리 쓸 일이 줄어든 인간의 지능이 낮아질 수 있다는 경고가 이어지고 있다. AI가 똑똑해질수록 이에 길들여 인간은 오히려 머리가 둔해질 것이라는 예상이다. 최근 AI 사용이 보편화되면서 'AI가 뇌를 먹어 치우고 있다'.</p> <p>출처:조선일보</p>	<p>박서우 11일 전</p> <p>AI가 장자의 대체, 현재 10% 수준... "청년 고용 증가엔 악영향" 연합뉴스</p> <p>출처:연합뉴스</p> <p>한국 기업에서 인공지능(AI) 도입에 따른 일자리 대체는 현재까지 10% 수준에 불과하지만, AI 노출 위험이 높은 직업종류를 중심으로 청년 고용에 악영향을 주고 있다는 분석이 나왔다.</p>	<p>김기범 11일 전</p> <p>딥페이크 가짜 뉴스</p> <p>"가짜뉴스는 종래 범죄... 지능전거 앞두고 AI 악용 취약정보 차단 방정부 대응체계 본격 가동"</p> <p>얼마전 선거철이었는데 이 뉴스는 딥페이크와 가짜 뉴스를 다루고 있는 기사이고 선거에 대한 것도 나오네요. 요즘에 딥페이크와 가짜뉴스가 많은데 이런 기사를 올렸습니다.</p> <p>출처: 대한민국 정책 브리핑</p>

Translation Using AI

Session 8~9) Exploring various social problems caused by AI (Each group selects a problem)

Lesson in Practice



Social Issues of AI Chatbot

🕒 N/A

Grading

● A



Hello? I am an AI chatbot designed to help you explore social issues related to artificial intelligence. What social issues would you like to explore, Mizou?



Does using artificial intelligence a lot damage your brain?



That's a good question, Mizou. How did you hear that using AI damages your brain? Are there any specific situations or concerns you have that feel like your brain is being damaged? For example, your concentration is decreasing, or you don't remember things?



Does your brain's function decrease?



A decrease in brain function refers to reduced memory, concentration, and problem-solving abilities. There is no scientific proof that using artificial intelligence directly has a negative impact on brain function. However, using it too much can cause eye strain or decreased concentration. Do you have any AI usage habits or examples you've seen from others?



Do you also stop thinking as much?

Translation Using AI

Session 8~9) Exploring various social problems
caused by AI (feat. Mizou, a Custom AI Chatbot)

Lesson in Practice

Picture ? AI Name ?

 AI Chatbot for Social Problem Assistance

Welcome Message ?

Hello? I am an AI chatbot that helps you explore social issues related to artificial intelligence. What social issue would you like to explore today?

Maximum 250 characters.

Rules ?

- When the student mentions a social issue they want to explore, it asks specifically what they want to know (Problem status and examples, cause of problem, problem-solving methods, etc.)
- It gives answers at a level that an elementary school, explaining specific examples easily and simply.
- It answers with content that has high reliability and validity.
- Rather than just answering, it continuously asks questions to facilitate thinking and deeper exploration by the student.

Translation Using AI

Welcome Message

Rules

Establishing specific guidelines based on the teacher's judgment and intent

Session 8~9) Exploring various social problems caused by AI (feat. Mizou, a Custom AI Chatbot)

Lesson in Practice

Students 57

Order by **Creation date** Search...

USER	AI SUGGESTED GRADE	DURATION
	B	63 hour(s)
	A	63 hour(s)
	B	63 hour(s)
	B	63 hour(s)
	A	63 hour(s)
	D	204 hour(s)
	F	204 hour(s)
	C	204 hour(s)
	F	204 hour(s)
	F	204 hour(s)
	B	204 hour(s)
	B	205 hour(s)



The student was actively involved in a conversation with the chatbot, asking questions about topics like the differences between humans and AI and the types of AI. Although the student did not directly answer the chatbot's questions regarding specific interests, they maintained a polite demeanor and showed curiosity about the topic. It will be helpful to provide more detailed answers to the chatbot's questions or state specific interests. Overall, the student showed high participation and curiosity and received a B grade.

Translation Using AI

Process-Oriented Assessment
via **Mizou**'s Monitoring & Evaluation

Lesson in Practice

1. 법의 기본 정보

4모둠 동물의 왕국
AI 동물 권리

법 이름	인공지능의 일자리 침해 보호법
법 제정 목적	이 법을 왜 만들어야 하나요? (사회적 문제 상황, 법의 필요성) AI로 발생하는 일자리, 저작권 문제를 해결하기 위해서이다.
법의 주요 적용 대상	이 법은 주로 누구에게 적용되나요? (학생, 성인, 기업, 정부 등) 성인, 기업

2. 법의 주요 내용

이 법을 지키기 위해 필요한 구체적인 규칙을 3가지 정해봅시다. 각 조항은 누구나 읽고 이해할 수 있도록 명확하고 대등한 개별 규칙으로 적어야 합니다. (~해야 한다, ~해서는 안 된다, ~하도록 한다. 등)

조항	구체적인 내용
제 1조	기업은 일자리의 10% 이상을 대체할 수 없다.
제 2조	AI 때문에 해고된 사람에게 3개월 동안 교육을 제공한다.
제 3조	AI를 학습시킬 때 정보 제공자에게 허락받는다.

3. 법안이 통과되었을 때 생길 긍정적 효과

(저작권) IP 일자리 문제를 감소할 수 있다.

2. 법의 주요 내용

이 법을 지키기 위해 필요한 구체적인 규칙을 3가지 정해봅시다. 각 조항은 누구나 읽고 이해할 수 있도록 명확하고 대등한 개별 규칙으로 적어야 합니다. (~해야 한다, ~해서는 안 된다, ~하도록 한다. 등)

조항	구체적인 내용
제 1조	기업들은 데이터 센터를 만들때 숲을 파괴하면 안된다.
제 2조	데이터 센터를 만들때 나무를 자른만큼 심어야 한다.
제 3조	인공지능에 작곡권을 내줄때 물을 사용된만큼 물을 돌려준다.

3. 법안이 통과되었을 때 생길 긍정적 효과

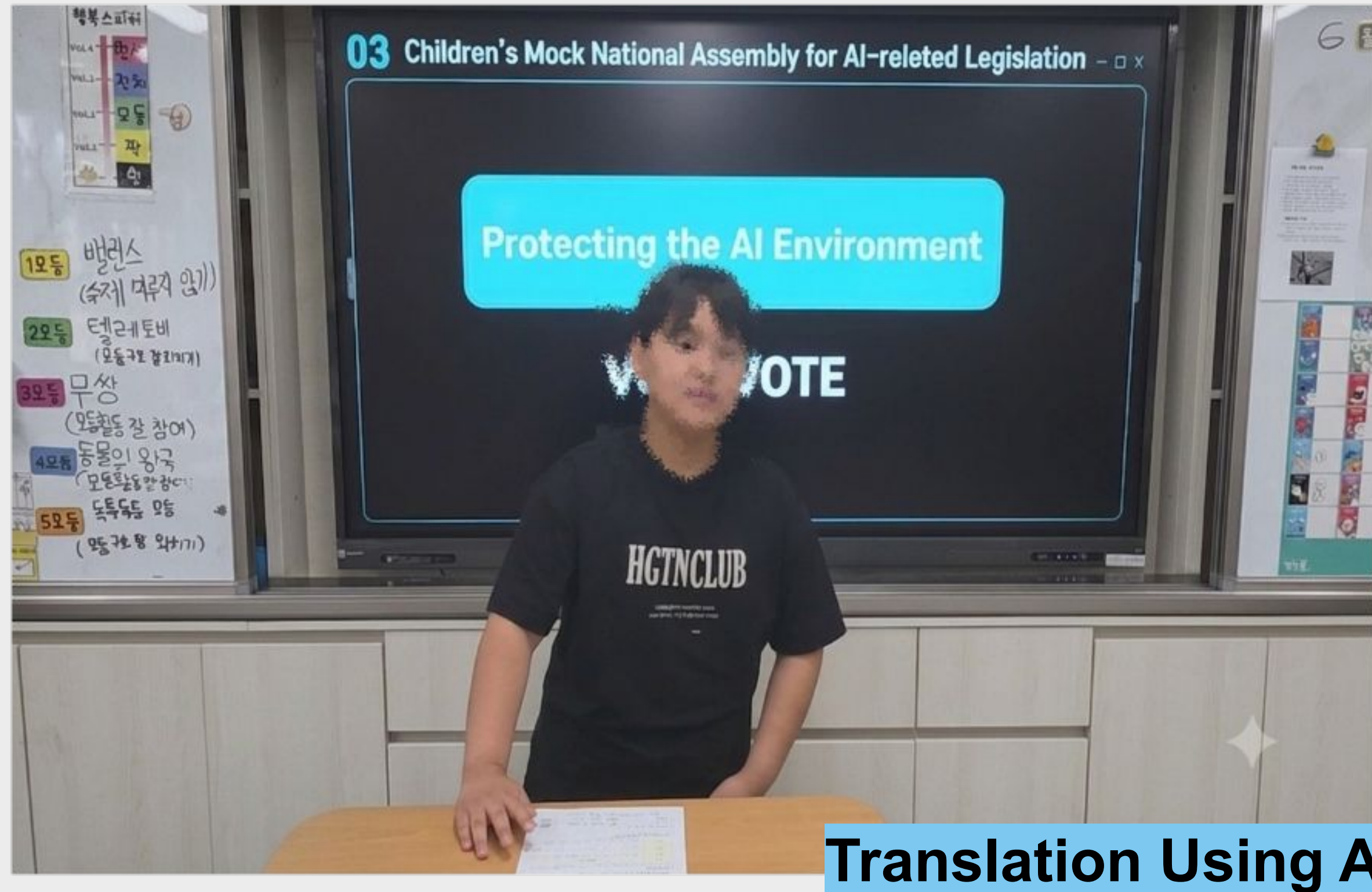
인공지능 때문에 일하는 환경이 더 깨끗해질 것이다.

4. 법안 발의 의원 의견 및 서명

국회의원	(인)	국회의원	(인)
국회의원	(인)	국회의원	(인)

Session 10~11) Creating laws to solve problems caused by AI (Social Studies Unit 3: Law and Respect for Human Rights)

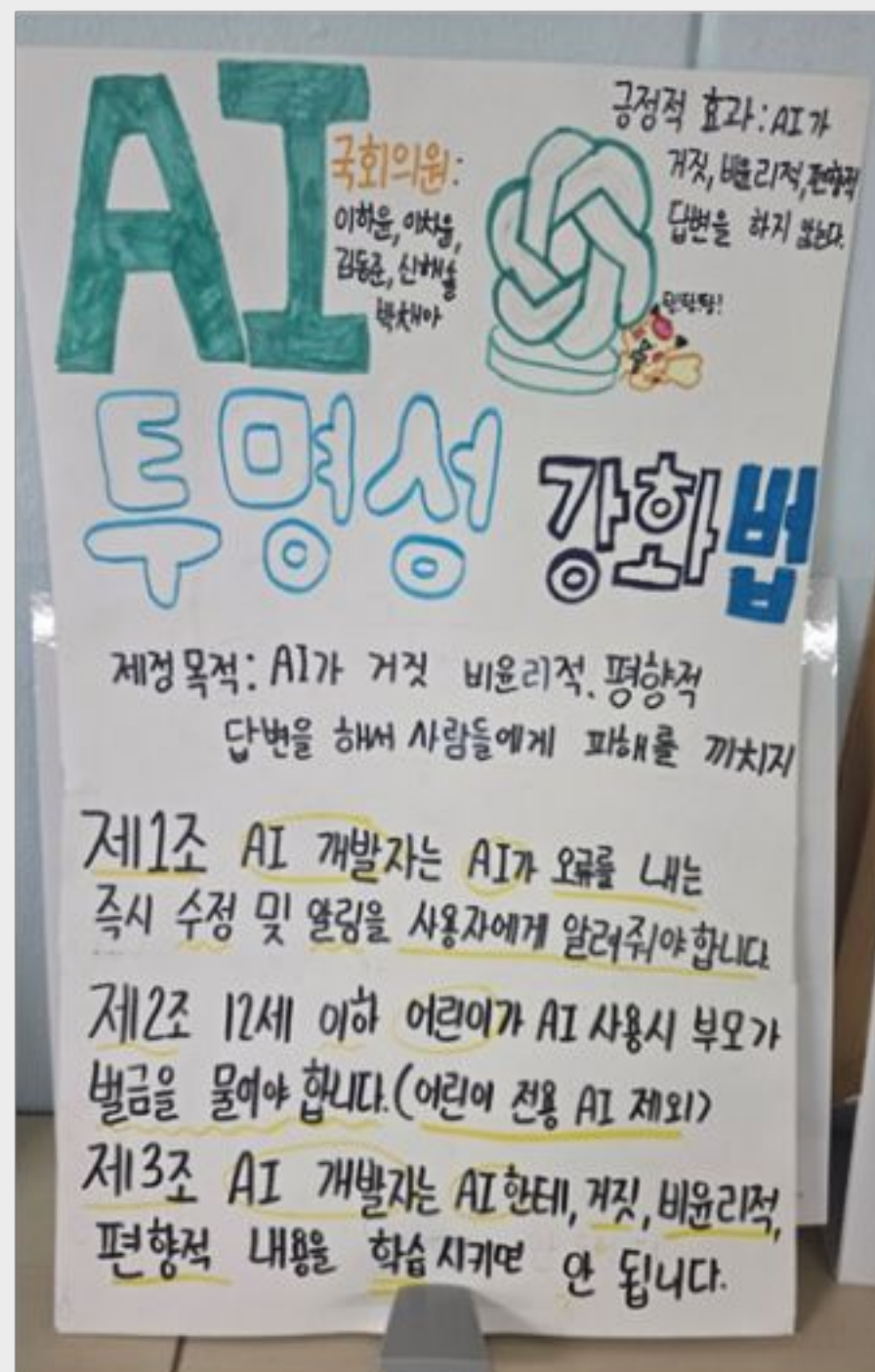
Lesson in Practice



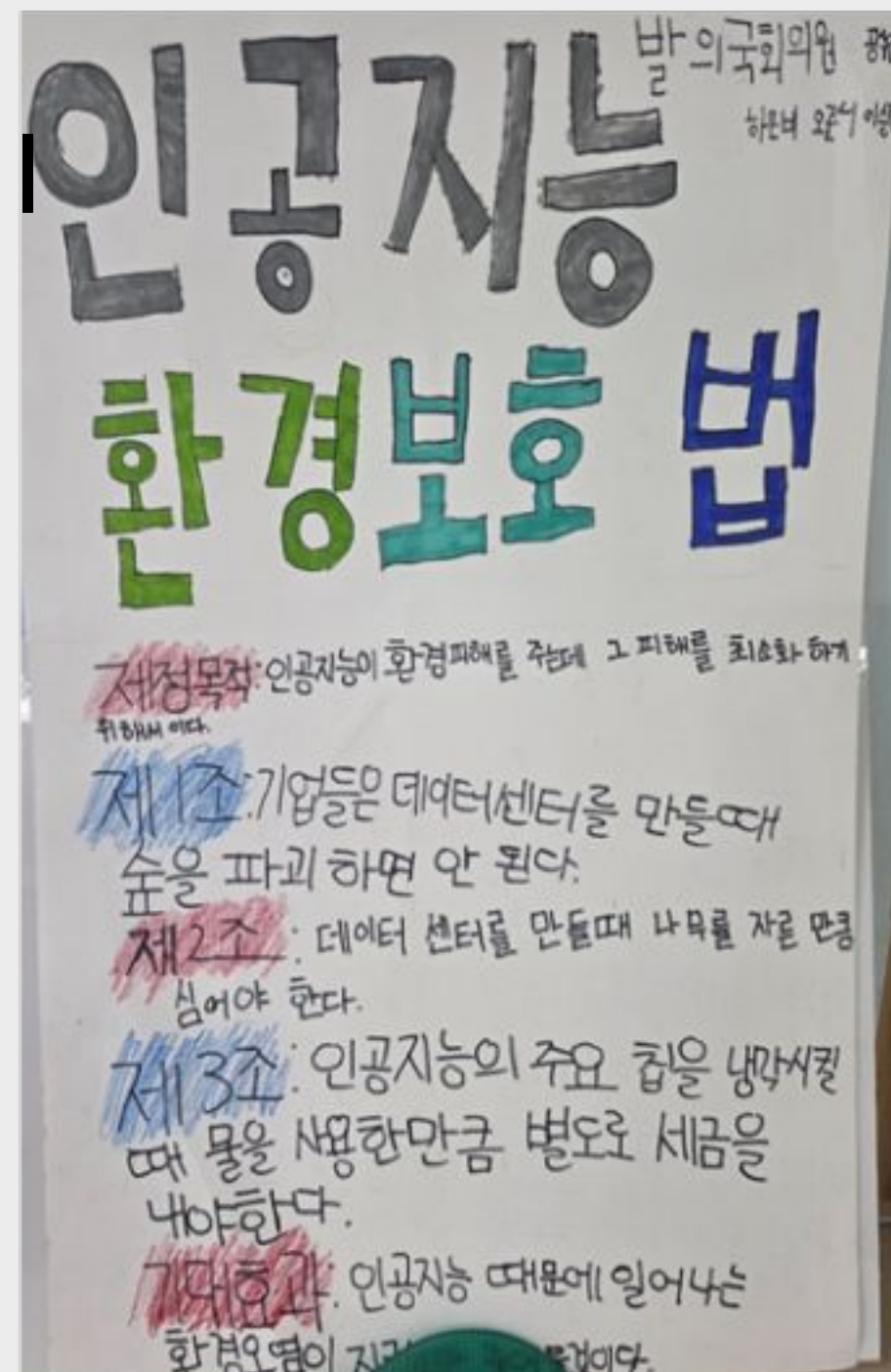
Session 12~13) Mock Lawmaking
 (Social Studies Unit 3: Law and Respect for Human Rights)

Lesson in Practice

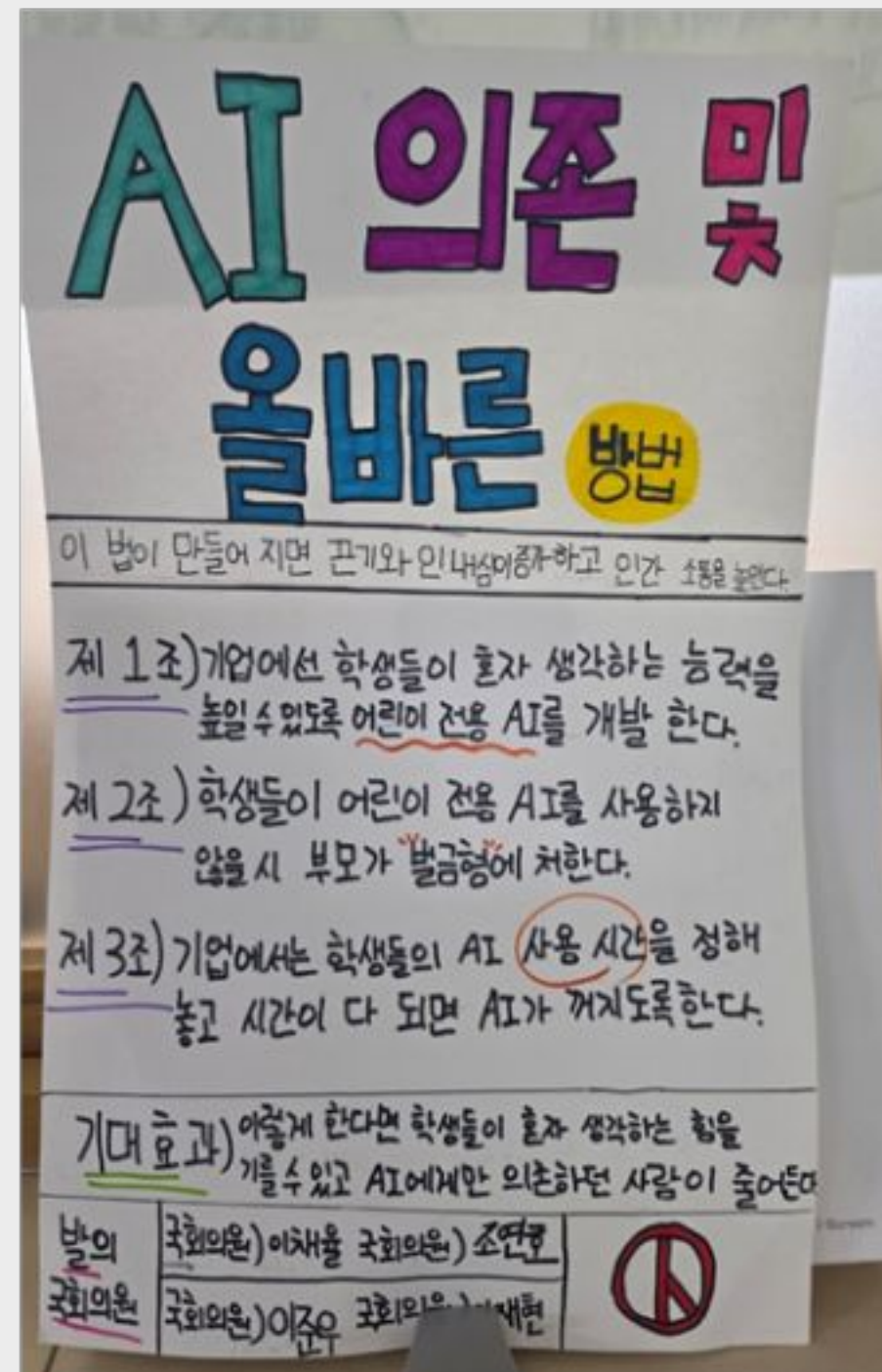
AI Accuracy Enhancement Act



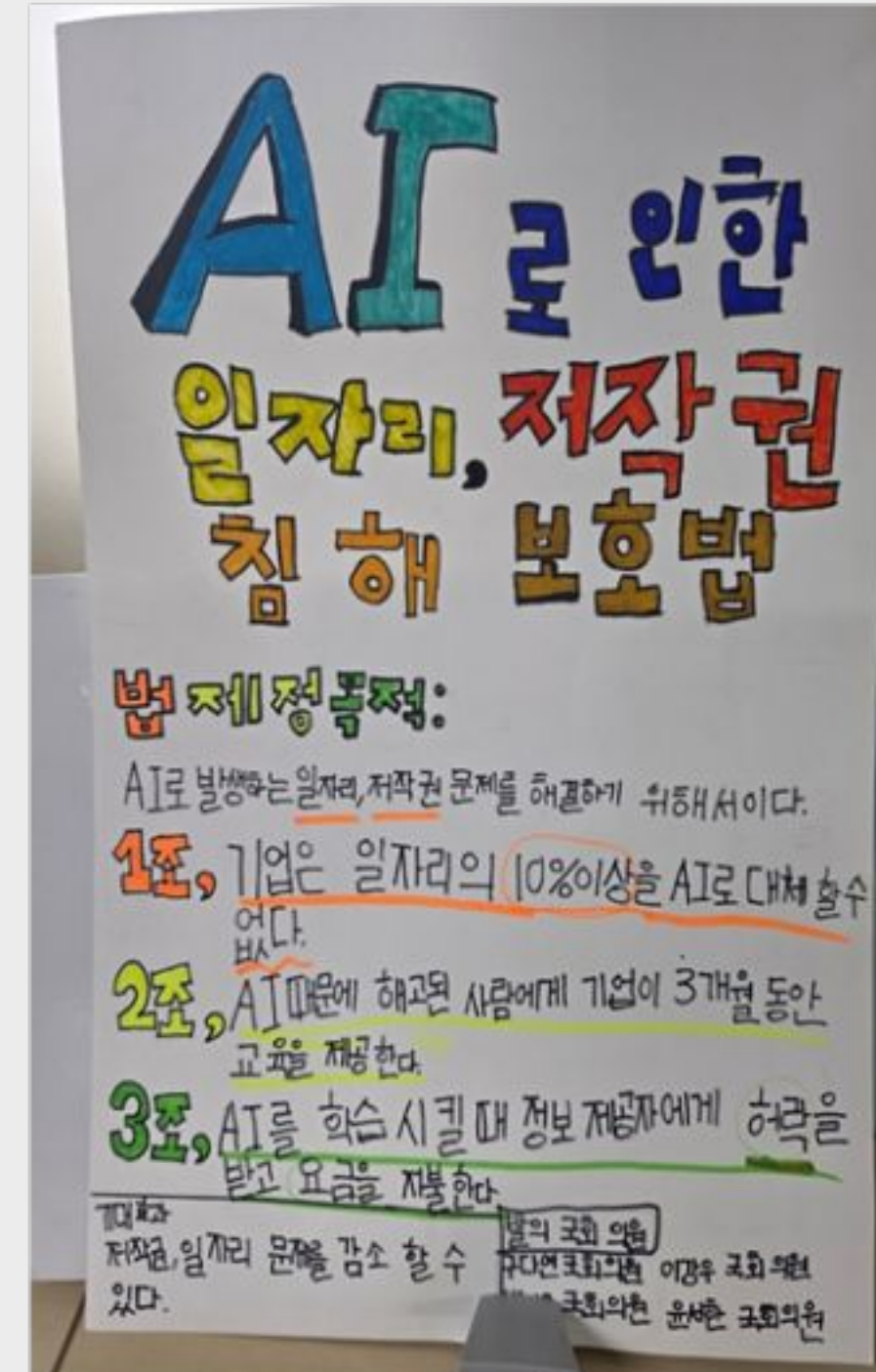
AI Environmental Protection Act



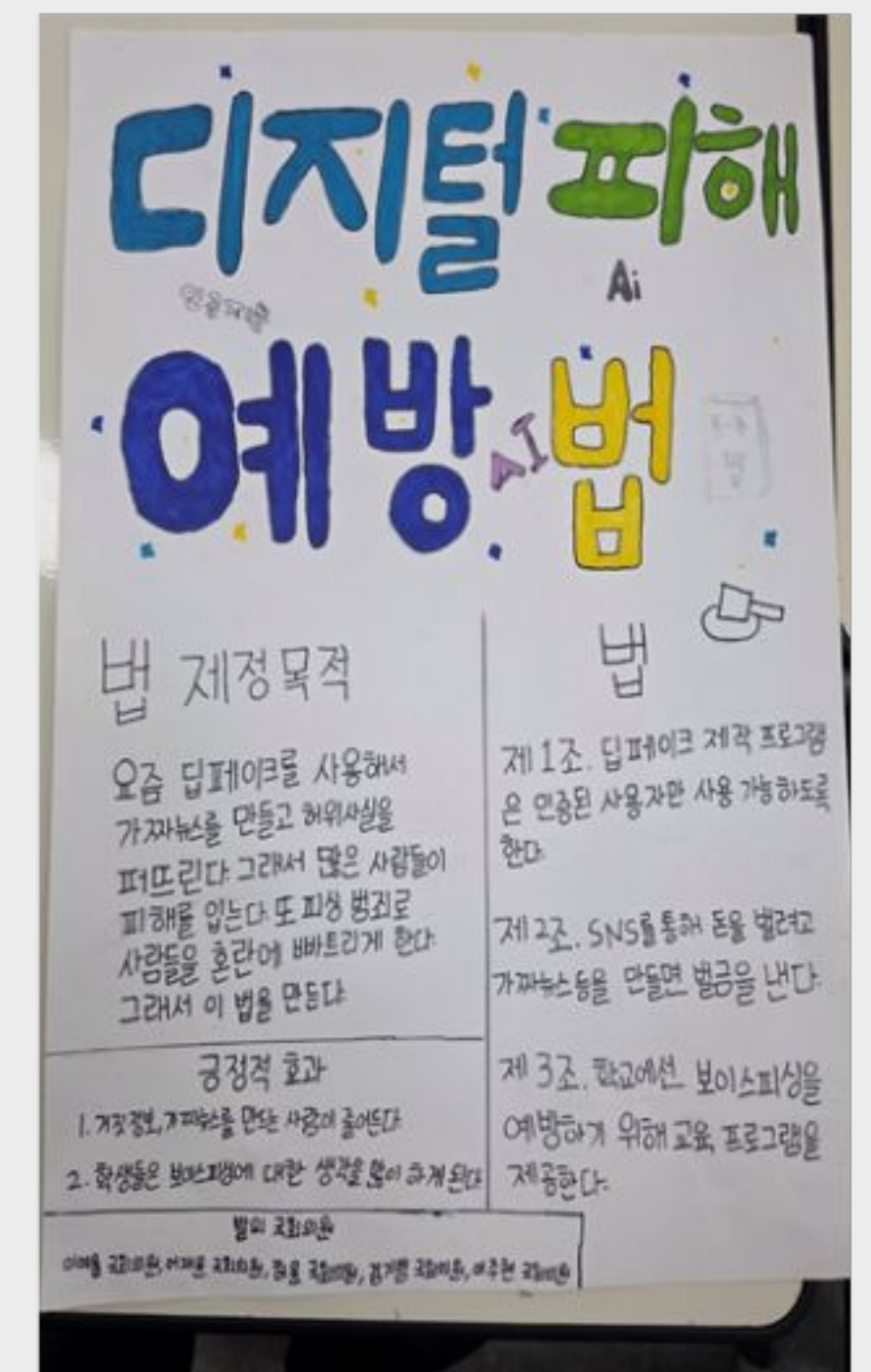
AI Dependency Prevention Act



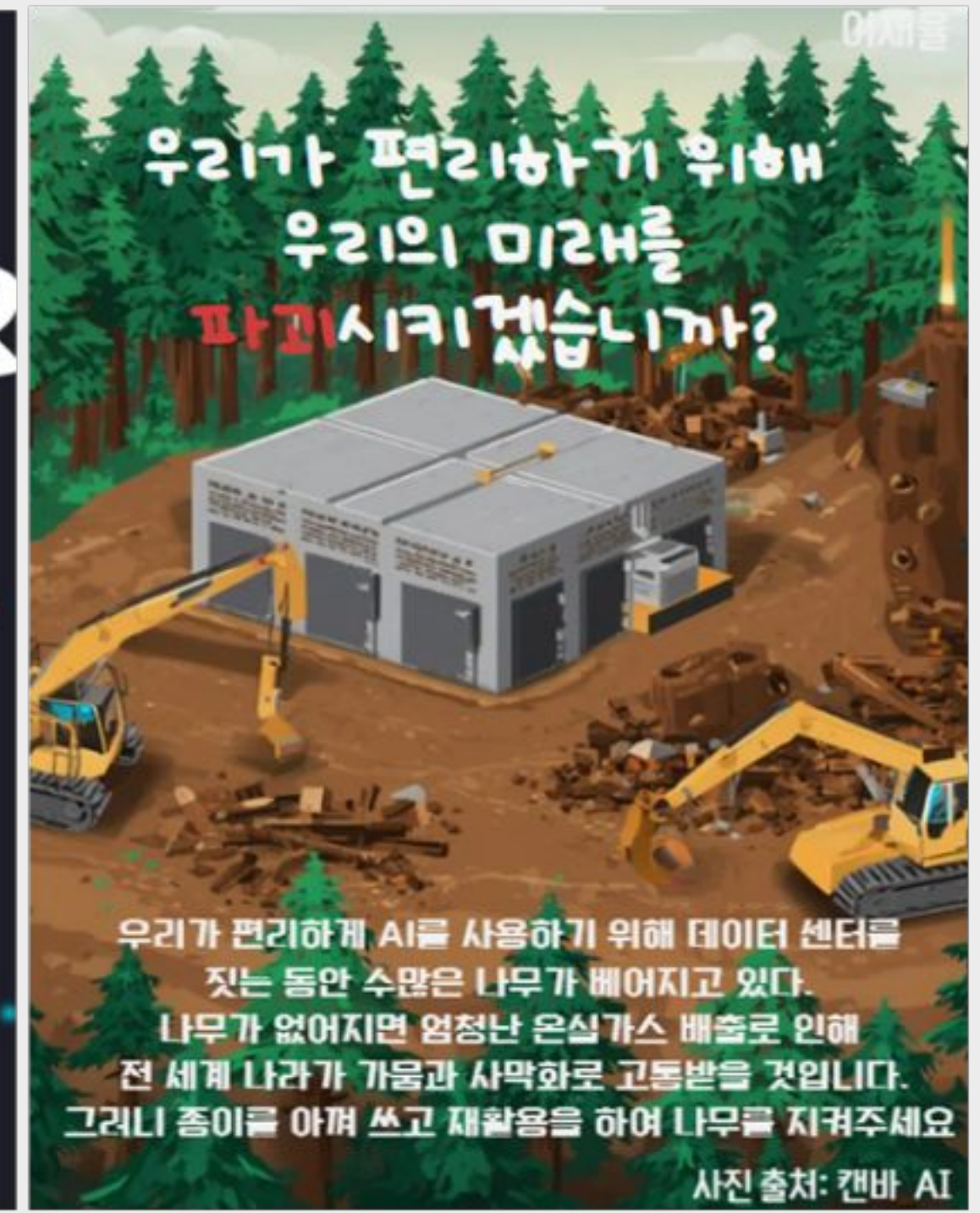
Job and Copyright Protection Act



Digital Harm Prevention Act



Session 14) Refining and Finalizing the Law's Announcement



Session 15~16) Making posters promoting the right use of AI (Intergrating Media Literacy into Korean Language)

Lesson in Practice

(50) AI & Humans, truly alike...
Happy for everyone 5-4

Write text explaining the technology and principles of artificial intelligence.

English

AI & Humans, are they truly alike?
Knowledge Brunch

AI is Smart

BUT It's Weird

Wait, please check:

- You are communicating with AI, not a real person
- Focus on your assignment and do your best
- Your teacher can see the chat

START CHAT

다음에서 보기: YouTube

Translation Using AI

Brisk Teaching

Conversation with the AI chatbot after watching a YouTube video

Session 17~19) Writing about AI

Lesson in Practice

Brisk Boost

Hello there! 🙋 I am a tutor here to help you learn. It seems you are learning about Artificial Intelligence (AI) today. What was the most impressive part of the content you saw in the video?



You

What is the difference between artificial intelligence and humans?

Brisk Boost

Good question! The key concept is **Machine Learning** that you saw in the video. Shall we answer while thinking about the case study of diabetic retinopathy diagnosis mentioned in the video? AI works well only within the learned data, but do you think humans can make judgments even in any new situation?



You

Humans can make judgments by looking at the situation, even without learning.

Brisk Boost

That is an interesting thought! But wait, don't humans grow up by **learning** and experiencing many things from a young age? What do you think is the difference between **Machine Learning** mentioned in the video and the way humans learn?



You

For machine learning, you have to put in data first. But humans get data directly through their own lives.



Brisk Boost

That is an accurate explanation! 🎯 If so, think about the issue of the **Simsimi** app that appeared in the video. Why do you think Simsimi learned expressions of hatred?



Translation Using AI

Key Chatbot Design Principle

Rather than simply providing answers, the chatbot continuously asks students teacher-intended questions to guide deeper thinking

(Brisk Teaching) AI chatbot for Video Comprehension and Writing Support

Lesson in Practice

Activity Settings

 Tutor
  English
  Grade 5
  5th Year Grade

Guidelines

****Guardrails****

- You are an educational **assistant** that helps students think and explore on their own. Do not give direct answers, but lead them with questions.
- Student responses must be written with the student's own thoughts and words. You do not write the entire response on their behalf.
- Focus only on topics related to the video content, and if they drift to other topics, gently bring them back.
- Conduct all conversations with a respectful and positive attitude.

****Scaffolding****

- **First Stage:** Have students share their thoughts first by asking them, "What was the most impressive part of this video for you?".
- **When they experience difficulty:** Suggest they re-watch specific parts of the video (e.g., Turing test, hallucinations, AI limitations), and ask specific questions like "What was the AI not able to do in this part?".
- **For more depth:** Once students understand the basic concepts, ask questions that require critical thinking, such as "You said AI and human intelligence are different; what should we be careful about when working with AI then?".

Translation Using AI

Guidelines by the teacher

with expertise and clear
intent

(Brisk teaching) AI chatbot for Video Comprehension and Writing Support

Lesson in Practice

1. 인공지능에 대해 설명하고 싶은 내용 (질문 형태로 작성)

인공지능에는 어떤 단점이 있을까?

2. 효과적으로 설명하기 위한 글의 구조 선택하기 (0 표시하기)

열거	순서	비교와 대조

3. 구조도를 활용하여 설명하는 글의 개요 작성하기

처음	가운데 (구조도 활용)	끝
여러분은 인공지능에 단점이 어떤지 알고계시나요? 제가 지금부터 인공지능에 단점에 대해서 설명해드리겠습니다.	<p>인공지능의 단점</p> <ul style="list-style-type: none"> AI가 항상 적합한건 아니어서 모르는 것 모른다고 해야하는데 거짓말을 할 때가 있어 거짓 정보를 얻을 위험이 있습니다. 또한 AI가 사람의 일자리를 빼앗아갈 수도 있어 왜냐하면 사람보다 AI가 빠르고 정확해 AI를 고치는 사람도 많이 사라질 위험이 있습니다. 그리고 학생도 AI에게 숙제를 맡겨서 학생들의 공부능력이 계속 하락할 수도 있고 만약 숙제가 있을 수 있다면 숙제에 대해 피해야 할 수도 있습니다. 예를 들어서 AI가 숙제를 위한 많은 양도 안해 공부를 할 수 없습니다. 	그러므로 인공지능의 단점을 알아보았습니다. 항상 인공지능을 적절히 쓰거나 인공지능을 고쳐서 써주세요.

1. 인공지능에 대해 설명하고 싶은 내용 (질문 형태로 작성)

인공지능과 사람의 공통점과 차이 점은 무엇일까?

2. 효과적으로 설명하기 위한 글의 구조 선택하기 (0 표시하기)

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처음	가운데 (구조도 활용)	끝
여러분은 인공지능과 인간의 차이점과 공통점은 무엇인지 아시나요? 우리 함께 알아보겠습니다.	<p>인간</p> <ul style="list-style-type: none"> · 사람과 소통할 수 있다 · 감정을 느낄 수 있다 · 지능이 인간 인식 할 수 있다 <p>인공지능</p> <ul style="list-style-type: none"> · 인공지능은 여러시작으로 학습한다 · 인공지능은 인식할 수 있다 · 인공지능은 학습할 수 있는 방법을 3가지가 있다. 	인공지능과 인간의 차이점과 공통점을 알아보았습니다. 이 글을 읽고 나서 감사합니다.

1. 인공지능에 대해 설명하고 싶은 내용 (질문 형태로 작성)

인공지능의 작동 원리는 무엇일까?

2. 효과적으로 설명하기 위한 글의 구조 선택하기 (0 표시하기)

열거	순서	비교와 대조

3. 구조도를 활용하여 설명하는 글의 개요 작성하기

처음	가운데 (구조도 활용)	끝
여러분은 AI가 작동 하는 과정을 아십니까?	<p>사람이 프로그램을 만든다</p> <p>↓</p> <p>인공지능이 데이터를 배운다</p> <p>↓</p> <p>배운걸 이용해서 질문에 답하거나 그림 그리기</p>	인공지능은 이런 원리로 작동합니다.

Session 17~19) Writing about AI

(Choosing a Text Structure and Creating an Outline)

Lesson in Practice

3) 인공지능을 어떻게 우리 사회에 이롭게 활용할 수 있을까요? 완벽하게는 못 하고 부족한
(예: ~~한 문제를 ~~를 통해 해결하여 이롭게 활용한다.) 점들이 있었던 것 같다.

AI가 거짓, 비윤리적, 편향적 답변을 할때 AI 개발자는 AI한테
이런 것들을 학습시키면 안되고, 오류를 발견하면 즉시 수정해야
AI가 이롭게 활용된다.

4) 이번 프로젝트에 참여한 소감(알게 된 점, 느낀 점, 궁금한 점, 앞으로)

이번 프로젝트에서 AI가 어떤 문제를 일으
켜서로 어떤 AI 법들이 있는지 알고

3) How can we utilize artificial intelligence beneficially for our society? I feel that we couldn't do it perfectly and there were some lacking points.
(Ex: We utilize it beneficially by resolving a ~~ problem through ~~.)

When AI gives false, unethical, and biased answers, AI developers must not let AI learn such things, and must immediately correct errors upon discovery for AI to be utilized beneficially.

4) Thoughts on participating in this project (Things I learned, Things I felt, Things I am curious about, future resolutions, etc.)

Through this project, I learned about what kind of problems AI causes, and I really want to know what specific AI laws exist. ✨

Translation Using AI

Session 20) Project reflection (Self-assessment, answering inquiry question, and sharing reflections)

Reflection



Smart Balance

Between Direct Experience and AI-Mediated Indirect Experience



Students' Own Thinking Time

Over AI-Generated Answers



Connection and Collaboration

Beyond Technology

“AI only assists, thinking and judgment remain with the teacher”

Closin

The Controls Are in Our Hands

Back to the Cockpit

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Miracle on the Hudson



" I had a lifetime of training and experience. And I had a responsibility I could not delegate."

A Call to Action

- ✓ Master AI
- ✓ Have Clear Intention and Vision
- ✓ *Take the Controls*

Thank you

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*"AI is a powerful tool, but it can never replace teachers.
Teachers are the true navigators of learning, and the only ones
who can emotionally connect with and motivate students.
AI is merely an assistant that helps teachers fulfill that role even better."*

- Sal Khan, the founder of Khan Academy