



From efficiency to learning: Developing AI literacy in collaboration with teachers through dynamic language assessment

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The what, how, and why of LAL & Teacher professional development



- Developmental, multidimensional, context-specific, and **co-constructed** (Vogt & Tsagari, 2025)
- Teacher lack of confidence regarding assessment practices
 - Even less confidence while also lots of enthusiasm in using AI as a tool for teaching, learning and assessment (Edmett et al., 2024; Sütçü & Sütçü, 2023)
- Importance of both theory and practice
- Teacher professional development as *co-construction*: collaborative action research (e.g., Giraldo & Murcia, 2018) Codesign (e.g., Goertzen et al., 2023); Vygotskian praxis (Poehner & Inbar-Lourie, 2020; Rezagah, 2025; **DD-Lang project**)

DD-LANG (Dynamic Diagnostic Language Assessment) Project



Research to advance the **theoretical, empirical and practical basis** of foreign language (L2) assessment supporting learning

- funded by the **Research Council of Finland** and University of Jyväskylä Sept.1. 2022 – Aug. 31. 2026
- focuses on **reading** and writing in English as a foreign language in upper secondary schools in Finland (16–18 -year-olds) during preparation for national Matriculation Exam (ME)

2 major goals:

- 1) Elaborating assessment framework to support teaching & learning by integrating **dynamic** and **diagnostic L2 assessment**
- 2) **Combining online dynamic-diagnostic assessment and classroom assessment, teaching, and learning**

Research as *praxis*



- “Theory without an experiment is a voluntary play of mind; an experiment without a theory is a knife without a handle” (Veresov, 2014)
- **Theory is used to change practice and is validated in it:** theory guides how teachers may develop their classroom practices, which allows for theory-building

Choose the best fitting answer to the question.

the next one. Ford at the time was putting the finishing touches on an all-electric version of its best-selling F-150 pickup, with a nifty feature for just such an emergency: in a power outage, the truck would be able to function as a backup battery, powering an owner's house for days. "I can't tell you how many F-150s I saw parked in driveways while I was driving around Texas during that week," says O'Gorman.

The F-150 Lightning is the latest offering in Ford's \$22 billion electric vehicle (EV) push. It's also a huge deal for the company which is fighting both fellow incumbents (like GM) and highly-valued upstarts (like Tesla and Rivian) for what analysts say will at least at first be a limited electric market but is likely to be the future of the auto industry. "We just absolutely think there's going to be a big shake out," Ryan O'Gorman told TIME of the EV market. "There're going to be clear winners and losers, and the pecking order of the industry is going to change."

What is Ryan O'Gorman's opinion about the future?

New manufacturers will gain leading positions

Old manufacturers will suffer bankruptcies

The future of the car industry is worrisome

The whole car industry is going to be altered

There will be new car manufacturers in the US



Learner's response

New manufacturers will gain leading positions

Mediation

Sometimes you don't need to know the exact meaning of an unknown word. But if you do, it's helpful to look at the **words and sentences around it**. If you understand the **general idea** of what you're reading, this will help you figure out what the unknown word might mean.

The future of the car industry is worrisome

The following may help you find the meaning of an unknown word:

-Which words come right **before or after** the unknown word? Do these words help you understand the difficult word?

- Can you **divide** the unknown word **into parts**? Can you recognise the **meaning of the parts**? (e.g., *un-help-ful*)

- Recognising only part of the meaning may help, too. Is the word **positive or negative**? What **part of speech** is it, for example, a verb (*to go*) or an adjective (*beautiful*)?

- How are **details** in a sentence or in several sentences connected? For example, the word *but* suggests that details are contrasted, and *because* tells us that a reason is given. Look for these kinds of words in the text.

The whole car industry is going to be altered

Correct!

Learner-chatbot interaction example



Learner query

why are you doing this to me

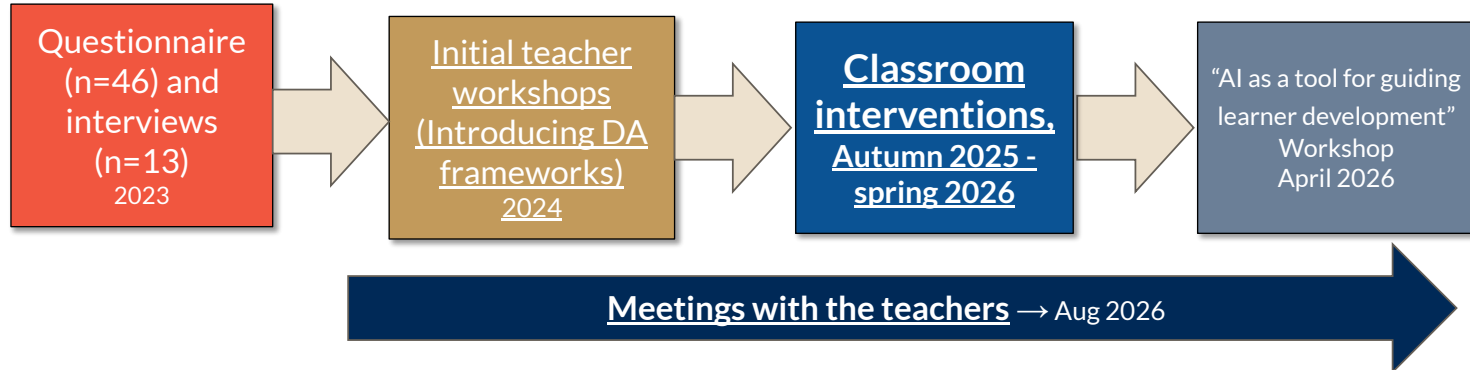
chatbot response

I understand that this exercise might be challenging, but it's **designed to help you improve your reading** comprehension skills. It's important to be able to understand and interpret written information, especially in academic and professional settings. **Don't worry, it's okay to make mistakes** during this process. **That's how we learn.** Keep going, you're doing great!

Our praxis with teachers



- 7 upper secondary schools in 4 cities in Finland, EFL classes
- EFL teachers (n = 14)
- Upper-secondary school students in various years (n = 513)



Developing conceptual understanding of AI as a pedagogical tool and what it means for assessment

Case of OPE10

Emerging joint understanding of AI as a pedagogical tool

(February 2025)

Dmitri: Have you actually used the AI in the classroom?

...

OPE10: I've prioritized kind of, um, asking the students to develop their own thinking over teaching them how to use AI as a tool ... I have to be more vigilant about AI in terms of actually teaching them how to use it as a tool, to sort of **help develop their own thinking instead of to replace their own thinking**, which is very often what they do. **And I haven't figured out how to do that yet.** But honestly, I haven't prioritized it.

...

Dmitri: Yeah, there are several reasons ... why we ... also thought, where do we enable the chatbot? One is, of course, kind of, because it's not just practice from the teacher's perspective, **it's also assessment information**, right? ... And... the chatbot gives away the correct answer... But I think the main reason there is exactly that the pedagogical tool, right? So that they wouldn't ask the question, ...what's the correct answer?..

OPE10: [Yeah, no **it's good that it's,**] **activated only after you get the right answer, because then you have to reflect on the process instead of get help for the process** into sort of straight forward away. ... It's still a good exercise to be able to point out why you came up with that answer and point out this is the exact part of the text and this is how I interpret it and whether it's one phrase or if it's, like, contextual understanding or if it's, like, to pinpoint that, why did I answer this, why did I get this answer and. Yeah, but **I think this kind of use of the chatbot encourages curiosity.** Um, and if they are curious, they will play with it, [and engage]

Using DD-Lang information in the classroom

(October 2025)



Dmitri: And I think that's also kind of an important part is like to like, how do we intervene? And when? Where?

OPE10: I like the fact that you **go around the classroom** and, actually **talk to the students** and go through the exercises with them. I feel like **I tend to give them a little too much autonomy** every now and then ... I don't want to bother them too much or make them feel uncomfortable ... but **I could let go of that and just chat with them more** and get to know them better in that way. So I feel like I have something to learn from you in terms of that.

...

Yeah, I usually try to make myself available, ask them if they need anything from me rather than start a discussion specifically, but **it's easier to approach them if you already know something about them** beforehand. And I feel like **this data could be one aspect**... Are they struggling because they don't know what they're doing and they're just too scared to say it? ... Like, what is the reason why they're not moving ahead with the exercises or, but this data could help with that, at least, you have that information before you **approach groups or students**, and then also, you know, in group work, or in formulating seating plans, or something like that, you can use the information to see **what kinds of groups you want to make**.

Instructional innovation:

AI, learner development, and teacher professional development in praxis

Case of OPE5

DD-lang course



- Elective course that was **designed and implemented collaboratively**
 - Weekly lessons starting from Oct 2025 until mid-Jan 2026
 - 6 second-year upper secondary school students
- OPE5 wanted to focus on **students working together**
- Our goal was to help the teacher to teach off their students by mediating both the teacher understanding and the students in the classroom, forming the **concept of mediated development**
- **Reading-writing connection, peer work** asking for and giving feedback with the intention to develop
- Classroom activities, including
 - DD-Lang reading exercises as the basis
 - **AI as a tool for learning**
 - Process writing with a focus on peer responding

Learner mediated/unassisted performance reports



Username	Set	item_count	attempt_count	correct_on_first_attempt	correct	mediation_score	avg_mediation_wo_correct
S1	Specific details, easier	4	4	4	4	4	0
	Specific details, difficult	5	5	5	5	4	0
	Deducing vocabulary easier	1	1	1	1	4	0
S2	Specific details, easier	5	13	1	5	2.4	2
	Specific details, difficult	5	9	3	4	3.2	2
	Deducing vocabulary easier	5	7	3	5	3.6	1
	Deducing vocabulary difficult	5	15	0	5	2	2
S3	Specific details, easier	5	16	0	3	1.8	2.2
	Specific details, difficult	5	7	3	5	3.6	1
	Deducing vocabulary easier	2	3	1	2	3.5	1

Learner: why is the answer the last one

Bot: The answer is the last one because it best matches the content of the text you read. The text states that Jeff Winter's style in his book is similar to his style as a referee. This corresponds to the last answer option, "The author displays the same style as he did when working as a referee." The feedback you received also supports this interpretation.

Learner: Can you tell the message of the correct answer easier?

Bot: Sure, the correct answer means that Bill Barich, in his book, was able to really capture the 1 spirit or heart of horse racing. He didn't just write about the races, but he was able to convey what makes horse racing special and unique.

Early planned activity based on the DD-Lang information



Planned activity	OPE5's reflection on implementation
<ol style="list-style-type: none">1) Ask Copilot to adopt the persona of a teacher: “Please in this chat adopt persona of a teacher of English who is very caring but at the same time wishes their students to have as much agency in their learning process as possible...”2) Ask it as much as you can about the task3) Then ask them to think whether the response helps them to learn something about this text and how to read it and about reading in general.4) After the chat with CoPilot, discuss in your group (/with your partner) what you learned about the text and about reading the text	<p>How did it go? How did the students engage in the activity, what feelings/emotions you observed? How did it feel?</p> <p>It was difficult for the students to think of questions to ask about the text, so I gave them some hints, and instructed them to ask ‘why option x is right and why option two is wrong’, but this CoPilot exercise did not work very well otherwise</p> <p>Some frustration (only a hint) was experienced by some students but mostly they were working and motivated all the time, asked questions and I navigated in the class, helping them and giving instructions when necessary</p>

Implementing a lesson together



Planned lesson (around the chatbot activity where we shift the students' understanding of the discussion with the chatbot)	OPE5's reflection on implementation
<ol style="list-style-type: none">1) Guiding principles:<ol style="list-style-type: none">a) AI as a tool for learning: what you ask and howb) Intentionality: learning Vs task completionc) Teaching off your students2) Students completing new set of DD-Lang tasks focused on main idea of a paragraph3) Teacher and researcher jointly observe and mediated students as needed:<ol style="list-style-type: none">a) not modelling but asking guiding questions4) Final discussion	<p>How did it go? How did the students engage in the activity, what feelings/emotions you observed? How did it feel?</p> <p>It was easier for the students to work with the chatbot this time and they managed to ask question that enabled them to learn more about the text and to help them understand the connection between reading and writing. One of the students even managed to rewrite the whole text in her own words and make the main idea 'visible' during the process, so the goal of the lesson was achieved this time.</p>

Implementing a course together with OPE5: Learners' use of AI as tool for learning



Before the intervention

Learner: why is the answer the last one

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...

Learner: what does "novel security features" mean

Bot: "Novel security features" means "new security features." In this context, it refers to unique or innovative features in electric cars that improve their safety or functionality.

After the intervention

Learner: why is that the best option

Bot: "The cost of travel" is the best title because it reflects the main idea of the text...

Learner: how can I practice this

Bot: You can practice reading comprehension in many different ways. Here are a few tips:...

Practice summarizing the main idea of a text in one or two sentences. This will help you focus on the essential points in the text....

Learner: what strategy will help me understand what the text is about most easily. Even if there are many correct answers, how can I understand what the main point really is.

Bot: To understand the main point of the text, you can use the following strategies: ...Ask yourself questions: **What is the author trying to say? What is the purpose of the text? What are the most important points in the text?**

Post-course discussion with OPE5



Vera: So do you think you want to try something or employ AI **more** like, for example, **in your usual [obligatory] courses that you teach?**

OPE5: **Actually, I do.** I asked AI to do, **to prepare questions and exercises for me.** It's especially handy with the language itself ... but **I can use AI in my in my job, not necessarily with the students,** but I do that as well. **The next phase** is to **using** it safe in **in a way that they use it in class like we did** ... So yes. I'm open, I know the limitations, I know the ethics, I know the, I should know what I can't do, so I think I can use it safely.

....

Vera: So you say the main kind of like, you know, like ways you could use AI is this kind of like being more efficient

OPE5: Well, maybe in the sense of, **time wise if I'm not pleased with the exercises that the book has to offer, I can make my own** or ... I can make things that are, what's the word, are suitable for the level of my students, so, yeah, it helps, **it helps me time wise and material wise**

Discussion



- Using **AI as mediational tool** to enhance teaching, learning and development
 - Using dynamic assessment framework to inform teacher understanding of AI as a pedagogical tool and their classroom practices
 - AI feedback to **developmental mediation**
- Developing AI literacy as a part of LAL in **dialectical collaboration** with teachers
- **Development is not linear** and may take time

Discussion



- Using **AI as mediational tool** to enhance teaching, learning and development
 - Using dynamic assessment framework to inform teacher understanding of AI as a pedagogical tool and their classroom practices
 - AI feedback to **developmental mediation**
- Developing AI literacy as a part of LAL in **dialectical collaboration** with teachers
- **Development is not linear** and may take time
 - **So how can we better support this process?**



Kiitos!
Thank you!

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