

Mediation +

Exploring the value of AI-generated insights in DA of L2 reading

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We invite audience discussion as we think about the following



- How might DA mediation and AI together create opportunities for L2 educators to reflect, rethink, & perhaps reorient to classroom practices?
 - Not taking stand on AI as insurmountable ‘problem’ or as necessary ‘solution’ to educational questions/challenges
- What ‘conditions’ (including other mediation) should we consider in trying to create such opportunities?

Background



Harrari (2024) on information networks: critiques Enlightenment idea that more information/knowledge leads to better outcomes

- Third Reich (info for bad purposes); Internet/algorithms today & political outcomes (both quality of info & how engaged with)

In education, shouldn't knowing more (e.g., greater insights) about learners help teachers better support learners?

Haywood & Lidz (2007): downside of much DA due to teacher uncertainty re. what to do w/ outcomes/insights; how to connect to teaching?

- Kozulin (2011) → benefit of L2 DA work b/c close collaboration w/ teachers

Background: Dynamic Assessment



Vygotsky's (2012) Zone of Proximal Development (ZPD): Garden metaphor

"Fruits" of development → fully formed abilities; individual self-regulation (internalized mediation)

"Flowers" of development → abilities not yet fully formed; partial capacity to self-regulate, partial understanding & control

"Buds" of development → abilities that are just emerging; limited capacity to self-regulate, beginning of understanding & control

*Conventional assessments: learner independent performance (i.e., self-regulation); may identify fruits

*DA: flowers & buds also important for full diagnosis of development

Background: DA (cont.)



Going beyond fruits → not just learner self-regulation but engagement in co-regulated activity; “supplement” self-regulation w/ mediation (e.g., reminders, hints, leading questions, prompts, feedback, models, collaboration)

- Mediation in DA can look like “good teaching” b/c development focus but goal is “diagnosis of development” (Vygotsky, 2012)

Info resulting from DA:

1. Observed changes in learner performance when mediation available
2. Quality of mediation provided to learners
3. Identification of problems/difficulties underlying learner performance

Value for teaching: support learners working through challenges; which learners might need more time or support than others

AI & Assessment Info



Jung (2024): AI has potential to provide considerable information to teachers (& learners) & therefore can positively impact educational practices & learning success

- *“AI can analyze student performance data to identify learning gaps, subsequently adapting course material in real time to better fit individual learning styles and paces ” (p. 31)*

However, remember Harari (2024) on information & outcomes

Also, Rea-Dickins (personal communication) speaking about formative assessment: if it doesn't help teachers & learners, what good is it?

Our Project: DD-LANG (Dynamic Diagnostic Language Assessment)



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**

Our piloting data example:



Choose the best fitting answer to the question.

Volunteering in Hospitals

Royal Voluntary Service has been there for the National Health Service since the beginning - and we're looking for determined people to keep this tradition going. When you offer your sympathy, commitment and skills as a hospital volunteer, you're helping to improve a patient's experience, support their recovery and ensure that they can return home safely, reducing the chance of them returning as patients. You can also offer help to staff and visitors by volunteering in one of our Royal Voluntary Service Hospital Shops or Cafés. If you haven't tackled anything quite like this before, don't worry. We have an experienced team of people who specialise in voluntary work in hospitals and can help you make the most of your time with us. They'll be ready to guide you through the whole process with plenty of support, showing you how to volunteer at a hospital and answering all of your questions.

What is mentioned as an example of volunteer work?

Creating a positive atmosphere in the hospital

Helping hospital staff in daily caring routines

Providing patients with basic medical help

Selling refreshments at the hospital canteen

Visiting patients at home after the hospital stay

Isnt this answer wrong because the text doesn't specify what kind of work is done for the shops of cafes?

(Leontjev et al., 2025)

Piloting data example (contd.)



Selected option / learner's query	Mediation / Chatbot's response
Creating a positive atmosphere in the hospital	Look at the key parts of the question and the options. Think about what the question is asking. Then try to find this information in the text, thinking about how you search for it.
Helping hospital staff in daily caring routines	Once you think you found the place with the details you need, look around this part and think about the meanings of words and phrases you see. Try to connect them to the question and the options. Remember that the details in the text are often said in a different way than in the question.
Selling refreshments at the hospital canteen	Correct!
Isn't this answer wrong because the text doesn't specify what kind of work is done for the shops or cafes?	The text mentions that volunteers can "offer help to staff and visitors by volunteering in one of our Royal Voluntary Service Hospital Shops or Cafés." While it doesn't explicitly state what kind of work is done in the shops or cafes, it's reasonable to infer that selling refreshments could be one of the tasks, as this is a common activity in such settings. Therefore, the answer "Selling refreshments at the hospital canteen" is not wrong. It's important to remember that in reading comprehension exercises, sometimes you need to make reasonable inferences based on the information provided.

The Study



- Research Question:
 - **How can dialectical teacher-researcher collaboration (a) shift teachers' thinking about assessment in relation to teaching & learning and (b) create space for developing classroom teaching and assessment?**
- **7 upper secondary schools** in 4 cities in Finland, EFL classes
- **EFL teachers** (n = 14; one opted out)
 - 11 female, 2 male, 1 not known
 - 14 - 24 years of teaching experience

A case of OPE5: Early meetings

They don't read (in Finnish)



OPE5: I notice especially in reading skills, they are not as capable as students used to be like 10 years ago or 15 years ago. I had one male student who got- (.) we had this reading comprehension exam in one of the tests in between and he- everything else was almost perfect but he got zero points in a reading comprehension that had 10 different questions, multiple choice, and **I was wondering how-how does this happen?**

Dmitri: What do you think is the reason?

Ope5: They don't read. They read- They **do** read in English, but it's social media, they don't write a lot. They- I don't know. Maybe these students have still used, you know, pens at school, I don't know. [...] Or they haven't been taught really how to, you know, **read text and how to get the main points or how to look for details.** I don't know.

Teenagers are conservative



Dmitri: we found it very interesting, right, in that you can group the learners based on their mediated performance [...]

OPE15: The problem is that **the classroom is full of individuals who just want to work on their own** and don't want to talk to anyone. So I have to explain every single time, “**Do it with a friend, explain it, work together**”, go through this every single lesson [...] Sometimes they have so little time outside the classroom that they just want to, you know, “I want to concentrate on this and I want to get this done. I don't have the time to help her.”

Dmitri: Right. Except for kind of course understanding that you're not just helping her, right? [You're actually helping-]

OPE15: [They're teenagers,] they don't understand.

Dmitri: What do you do with in this cases, like if you wanna have peer activities?

OPE15: Well, you force it on them. (laughter)

OPE5: You give them a choice. [...] You don't always have to do things the same way. So sometimes you can give a choice, you can do this individually, but this task everybody does. So if you're flexible, they learn it. **They just- They're conservative, teenagers are conservative.**

The starting point (as refracted by OPE5 towards the end of the course)



OPE5: [t]he starting point was an **old dream of mine**, I think, from long, long ago, to have a course where **students could learn from each other by helping each other**. And the original idea was, I think, writing. But, uh, as I got the opportunity to take part in the Revita DD-Lang group, uh, we discussed this course idea last spring, I think, when we thought about how to proceed after the a first lessons with the first-year students in May.

Praxis with 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**
- We introduced the concepts of teach off your students (Johnson et al. 2024) and collective expert (Davin & Donato, 2013)
- Classroom activities, including
 - DD-Lang reading exercises as the basis
 - **AI as a tool for development**
 - Process writing with a focus on peer responding

Discussing learner reports

item_id	attempt_1	attempt_1_answer	attempt_2_is	attempt_2_an	attemp	attempt	attempt	attempt	dialogue	
									bot: Infrared, sometimes called infrared light, is a type of electromagnetic radiation with wavelengths longer than visible light but shorter than microwaves. It is invisible to the human eye and is generally understood to include wavelengths from around 780 nm to 1 mm. Infrared radiation is emitted or absorbed by molecules when changing rotational-vibrational movements. It is used in various fields including industrial, scientific, military, commercial, and medical applications. For example, night-vision devices use active near-infrared illumination to allow people or animals to be observed without	
				Set	item_count	attempt_count	correct_on_first_attempt	correct	mediation_count	mediation_score
				1	5	9	3	5	4	3.2
				2	5	12	1	5	7	2.6
				3	5	11	2	5	6	2.8
				4	5	9	3	5	4	3.2
				1	5	12	2	5	7	2.6
				2	1	4	0	1	3	1

And discussed the learner reports together with OPE5



Dmitri: ...There were a couple of items where [student's gender] needed-

OPE5: Yeah, because [student's gender] is, I think [student's gender] is the kind of student who is pretty good, but [different student] needs help with some, some things.

Dmitri: So, so that would be level one mediation. And then, twice needed just a little bit of help and there is and once needed level three mediation. So it's overall, I would say [S's gender] is kind of middle-ish. So we've got [a different student's gender] who is, who is actually pretty good. I mean, not almost no, no items where when they needed when they needed help, but they did ask a lot from the chatbot.

OPE5: Yes, [student's gender] had time.

Dmitri: ...Oh, interesting. Now, like a lot of that had to do with asking to translate certain things... And then there's that student actually needed quite a bit of help... Then there are students who needed a lot of support like this one student, right? And then there are interesting things that they that they ask, they ask, like, why is this answer right, is essentially what they're asking, like throughout?

OPE5: Yeah, **because they were** expecting it to be in the in the same words or in the same way as in the answers

Dmitri: So we've got the students who are pretty good is finding the correct answers. And asked chatbot about where *it is* essentially, and then we've got the students who are needing a lot of help and asking why is this answer right. And then they've got the middle sort of ground students who needs a little bit of help.

And discussed the learner reports together with OPE5



Dmitri: Right maybe what you could do for the next time that you see the students, right, is to go through their responses and try to classify them into like three groups like that.

OPE5: Yeah

Dmitri: Right. And also the kind of kind of things that they asked from the chatbot, because we could also see that they are they are kind of, it's easy to see the patterns there, right?...

OPE5: yes there was a pattern yes.

Dmitri: They also **asked** different types of questions, which is also interesting, which kind of means that what we, what we could do is to work with that right in terms of learners kind of... Remember we talked about this, um, how it's called collective expert. When the students who bring their brains together and suddenly they can complete the tasks, right? Because they have their own, uh, their own ways of going through the tasks, their own ways of thinking about the tasks, right?...

Dmitri: Remember, we talked like when we started working was like with enough support, right? Learners can complete like really difficult tasks.

OPE5: Yeah, and they were asking the questions, they were asking where about that text, because I noticed many, many of them, **were asking, yeah**

Dmitri: So, so the activity should be like students helping students or the students working together. I think that is an important point to keep in mind. So we know that they can, uh, work individually and they can focus **and they are** concentrated and whatnot. But, um,

OPE5: Now that we have the three groups, it's easy.

Instructional intervention

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.

Implementation of instructional intervention



Planned lesson (around the chatbot activity where we shift the students' understanding of the discussion with the chatbot)	OPE5's reflection on implementation
1) Guiding principles: a) AI as a tool for learning: what you ask and how b) Intentionality: learning Vs task completion c) Teaching off your students 2) Students completing new set of DD-Lang tasks focused on main idea of a paragraph 3) Teacher and researcher jointly observe and mediate students as needed: a) not modelling but asking guiding questions 4) Final discussion	How did it go? How did the students engage in the activity, what feelings/emotions you observed? How did it feel? 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.

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**

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: **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?**

Refraction on the praxis



OPE5: [t]he starting point was an old dream of mine, I think, from long, long ago, to have a course where students could learn from each other by helping each other. And the original idea was, I think, writing. But, uh, as I got the opportunity to take part in the Revita DD-Lang group, uh, we discussed this course idea last spring, I think, when we thought about how to proceed after the a first lessons with the first-year students in May. [...] **we wanted to make the students think about their own learning and try to get as much as they could from the AI exercises to learn to get as much as they could, could out of texts and the writing process [...] And then we used peer to peer discussions. We made them talk about, uh, their main ideas when writing and we asked them to get, uh, give feedback to each other and also to write down everything: how they wanted or what kind of feedback they wanted and what they felt after getting the feedback. And also we asked them what they learned about the feedback.**



OPE5: you made me think about many things like mediation, creativity, which is always part of the a writing process and any learning... So mediation, creativity, teaching OFF your students, which I love... The collective expert is very fascinating because that's kind of the student, students working together, becoming collective experts

Reminder of Discussion Points



- How might DA mediation and AI together create opportunities for L2 educators to reflect, rethink, & perhaps reorient to classroom practices?
 - Not taking stand on AI as insurmountable ‘problem’ or as necessary ‘solution’ to educational questions/challenges
- What ‘conditions’ (including other mediation) should we consider in trying to create such opportunities?



Kiitos!
Thank you!

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