

How to implement dynamic assessment to enhance L2 development

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Traditionally, students receiving assistance while taking a test is deemed cheating, a belief based on the premise that assessment needs to evaluate unassisted performance. However, to the proponents of Sociocultural Theory in general and Dynamic Assessment (DA) in particular, such guidance through interaction with the examiner during the assessment session can be beneficial because it can reveal the learner's current abilities as well as potentially problematic areas. Upon diagnosing the shortcomings in the learner's interlanguage, the examiner can assist the learner to remedy them and go beyond the current capabilities. This principle of DA stands in contrast to the conventional view of assessment that conceives assessment and instruction as separate. Given that in DA instruction is embedded in assessment, it can have profound implications for classroom teachers. This paper discusses the affordances of DA along with its underlying theoretical framework and illustrates how it can be incorporated into second language classroom assessment.

Introduction

Before undertaking an attempt to demonstrate how DA can be implemented for assessment, second language (L2) teaching, and learning, we discuss its underlying theory and central concepts, and how it differs from traditional assessment¹. In DA, when examinees struggle during a test or make a mistake, the examiner (referred to as a mediator in this approach) intervenes and provides clues and hints, starting from the most implicit and gradually moving towards more explicit ones, and if necessary, ending with the provision of the correct answer and some explanations. The rationale is that through such interaction, the mediator brings to the surface not only the fully developed but also the partially internalised cognitive functions. This diagnostic process offers the possibility to the mediator to intervene and promote development. The emphasis is placed on interaction while assessment is grounded in Vygotsky's

sociocultural theory (SCT) of learning which posits that cognitive functions occur as a result of interaction with others (Poehner, 2008; Swain et al., 2015). Vygotsky (1998) argued that mediation can help learners convert their ‘maturing’ abilities to ‘fully matured’ or ‘internalised’ ones (p. 202). He referred to the difference between what one can do independently as opposed to with assistance as before the Zone of Proximal Development (ZPD), which is defined as ‘the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers’ (Vygotsky, 1978, p. 86).

To highlight the affordances of DA, its advocates (e.g., Feuerstein et al., 2002; Lantolf, 2009; Poehner, 2008) compare it with Non-Dynamic Assessment (NDA). Unlike NDA that views assessment and instruction dualistically and puts emphasis on solo performance, DA has a monistic view towards assessment and instruction and underscores co-constructing a ZPD with the learner (Poehner, 2008). That is, whereas NDA attempts to gain insights into learners’ current level of knowledge or ability, DA pursues the threefold purpose of (1) revealing the current knowledge, (2) illuminating developmental processes and the emerging abilities, and (3) guiding learners to move beyond their current level of ability (Poehner, 2008).

To illustrate, consider an NDA for a speaking test where the learner answers some questions and only receives a score after the exam. This deprives both the examiner and the learner of identifying the weaknesses and the potential solutions that could serve to redress the problems (Poehner, 2008). In DA, however, if the learner makes, for instance, a grammar mistake, the mediator first gives an implicit clue to determine whether the learner can self-correct, in which case the erroneous structure can be construed as an emerging one (not fully internalised), and through further assistance, the learner may learn the grammar rule and use it correctly afterwards (Anton, 2009). Interaction during assessment allows for a more accurate picture to emerge of the learners’ current and developing abilities and, most importantly, helps them to realise their potential.

As already mentioned, the provision of support to learners struggling with a task is an integral part of DA, and such assistance is referred to as mediation and scaffolding. For mediation to be optimal, it needs to move the learner from being other-regulated to self-regulated (Swain et al., 2015). The goal should not be to merely help learners to successfully complete the task and get the desired grade, but rather, mediation needs to encourage self-discovery, which can ultimately promote development and independent functioning (Poehner, 2008). In doing so, prompts and clues should start from the most implicit forms, and depending on the learners’ responsiveness,

move to more explicit ones. The aim is to provide minimal support and delegate maximum responsibility to the learner (Herazo et al., 2019).

Undoubtedly, providing such individualised mediation can be an onerous and time-consuming task, one that can limit its use to only small-scale classroom assessment and not large-scale, high-stakes proficiency exams. To overcome this limitation, two general DA approaches have been proposed where the distinguishing feature is the flexibility in mediation. The first approach is referred to as interventionist, in which mediation entails the use of preselected, standardised hints that are the same for all test-takers, making it more suitable for a larger group of learners. The second approach is interactionist, in which mediation is in the form of dialogic interaction fine-tuned to the individual's needs, thereby limiting its application to small classes (Lantolf & Poehner, 2004).

Dynamic assessment approaches

Interventionist

Interventionist DA involves the use of predetermined mediation that is not tailored to individual student needs. Mediation in this approach can take several forms. It can be prompts which are sequenced in a hierarchical order ranging from implicit to explicit, with assigned numerical values. Alternatively, mediation in a computer-delivered multiple-choice test can be in the form of hints that learners receive upon selecting the wrong answer. Yet another variation is the use of an intervention (a session to remedy students' problems) for the whole class. In this form of interventionist DA, learners are given a pre-test, which is used to determine their weaknesses, followed by an intervention that addresses these. Finally, to measure the effectiveness of the intervention and also to give learners an opportunity to expand their ZPD, a post-test that is slightly more challenging than the pre-test is administered.

Regardless of the nature of the intervention and mediation, in this approach, hints are standardised and identical for all learners, and this is done to maximise objectivity throughout the assessment procedure (Lantolf, 2009). Since mediation here is not individualised, interventionist DA can be used to assess a group of learners at the same time. The caveat, however, is that its lack of flexibility in being sensitive to learners' ZPD makes it more compatible with the principles of NDA than DA (Poehner, 2008).

Interactionist

Unlike interventionist DA that focuses on standardisation and objectivity, interactionist DA adheres more to Vygotsky's theory of learning that emphasises development as a result of mediation targeting an individual's ZPD. In this approach, assistance is offered individually, which gives mediators more leeway to tailor the mediation to

best match a learner's developmental stage. Mediator–learner collaboration offers valuable insights into a learner's true abilities and weaknesses, and at the same time offers an opportunity to resolve their difficulties. The following section will provide examples of this approach for the assessment of different skills.

Before concluding this section, however, it is worth mentioning that both interventionist and interactionist approaches can be administered in two formats, referred to as cake or sandwich, with the former referring to the mediation offered during the administration of assessment and the latter referring to mediation provided separate from assessment (Sternberg & Grigorenko, 2002). The subsequent section will provide some practical guidance and examples on how to draw on these two approaches for the assessment of receptive skills (reading and listening), as well as productive skills (speaking and writing) using both cake and sandwich formats.

Using DA approaches to integrate teaching and assessment

Assessment of receptive skills: reading and listening

In order to use the interventionist (sandwich) approach for the assessment of reading skills, teachers can use the pre-test/intervention/post-test format. For the pre-test, learners read a passage and answer the given comprehension questions. Then, rather than simply giving grades, teachers can use the results as a baseline to diagnose what question types most learners seem to struggle with. Is it the questions that require a more detailed understanding of specific points, or is it the ones that require a general understanding of the main points? The answers to these questions can inform the content of the intervention, which is followed by a post-test that can potentially reveal the trajectory of development. It should be noted, however, that students' inability to answer a certain question type cannot be exclusively attributed to their unfamiliarity with that question type. Instead, an intricate network of factors, including insufficient command of vocabulary and grammar, may also contribute to the failure of answering reading comprehension questions. Nonetheless, an intervention centred on reading strategies and familiarity with question types might still be facilitative. The intervention should not be designed to simply translate into good grades by teaching to the test. Rather, the goal of the intervention should be to promote development. For instance, in the intervention session of the reading test, learners can be introduced to some metacognitive strategies which can be applied to different passages (Kozulin & Garb, 2002). The number of treatment sessions and reading passages can be decided by the teacher, but ideally, the passages in each session and the post-test should be slightly more challenging than the preceding ones. The underlying premise for the incremental increase in the difficulty level is that, according to Vygotsky (1978), development should not be merely limited to

similar tasks and instead new tasks should be more cognitively demanding to further challenge learners to keep developing, or in other words, modify their abilities and stretch their interlanguage (Poehner, 2008).

Based on Feuerstein's model of transcendence, an important feature of DA is to examine whether the development made as a result of mediation carries over to similar or more challenging tasks (Feuerstein et al., 1979). These tasks can range from slightly more demanding, referred to as a 'near transfer task', to significantly more complex ones, known as 'far transfer' and 'very far transfer' (Poehner, 2008). The decisions regarding transcendence should be based on learners' proficiency levels. For beginners, far transfer tasks can lead to further confusion, whereas for more proficient learners, they can potentially result in expanding learners' ZPD. Determining the difficulty level of a reading passage can be challenging for classroom teachers, but a potential solution could be using passages from standardised tests (e.g., IELTS² and TOEFL) or books which contain passages with different levels of difficulty (see Ableeva & Lantolf, 2011, for an example of a change in genre increasing the difficulty of reading tests). The integration of assessment and instruction should not be interrupted even for the post-test; therefore, the grade must be accompanied by feedback to further facilitate learning. To save time when doing so, Kozulin and Garb (2002) recommend dividing learners into three levels based on their grades on the post-test and giving the same general feedback to all members of each level.

An example of the interactionist approach (cake format) in assessing listening is a one-on-one exam session. When a learner fails to answer a listening comprehension question, the teacher can intervene by using some strategies, such as asking questions and drawing the learner's attention to a specific part of the audio to determine the root of the problem. This is because struggling to answer listening questions is not necessarily due to weak listening skills, but it could be the result of insufficient vocabulary, a lack of grammar knowledge, and/or unfamiliarity with phonological rules such as assimilation and elision (Ableeva & Lantolf, 2011). In this regard, Ableeva (2008) found that for some learners, the inability to answer some listening comprehension questions is due to unfamiliarity with a single lexical item or a piece of cultural information and not weak listening skills.

Needless to say, such individualised interventions might be feasible only in a small class or a tutorial session. For large classes, Computerized DA (C-DA) has been proposed as a potential solution because computers can supply hints and feedback to all learners simultaneously and guide them during the assessment (Tzuriel & Shamir, 2002). C-DA can be administered on Learning Management Systems such as Moodle and Blackboard. A Moodle platform, for instance, enables teachers to devise tests that provide immediate or interactive feedback when learners answer an item incorrectly.

While creating items for a multiple-choice test on this platform, teachers can add a clue that is shown to learners upon choosing the wrong answer (see Figure 1). In order to ensure fairness and to determine whether the learner answered correctly on the first attempt or after multiple failed attempts, the software can be set up to deduct a percentage of the score after each incorrect try.

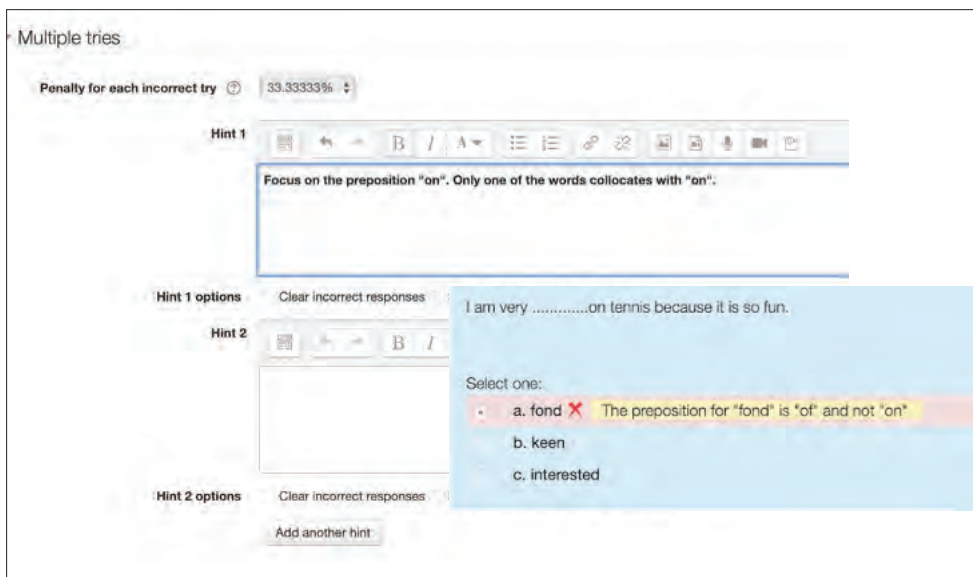


Figure 1. A snapshot from Moodle

Assessment of productive skills: speaking & writing

This section illustrates how by drawing on the interactionist (cake) approach, teachers can tap into hard-to-observe abilities and potentially guide learners to push their ZPD and simultaneously assign grades during a speaking test. The following protocol, taken from Antón (2003, as cited in Poehner, 2008), demonstrates how teachers can reveal a learner's ZPD through mediation. In Antón's study, participants watched a short movie and were required to narrate a story in the past tense. As can be seen in the excerpt below, in response to one of the participants who used the past tense incorrectly, the examiner (E) mediates by saying:

1. E: You started the story in the past and then, halfway you switched.
2. P: Yes, yes.
3. E: To the present.
4. P: Yes, yes. I heard.
5. E: Do you want to try again using the past? And you can ask me. If there is a verb you do not remember it's OK.

6. P: Yes, yes, from the beginning?
7. E: Perhaps from the middle
8. P: In the past, yes, yes.
9. E: Did you realise that you made the switch?
10. P: Yes, yes, I heard.

Antón (as cited in Poehner, 2008) reported that after this one-shot mediation, for the remaining of the narration, the participant used the past tense accurately with only occasional lapses. In her study, Antón also presented the protocol of another student struggling with the same target structure—the past tense. The second student, however, failed to self-correct even after explicit hints and explanations. The fact that both learners used the past tense incorrectly at the outset of the assessment but performed differently due to the mediation can have important implications for teachers. Had the examiner not mediated, the extent of the participants' knowledge of the past tense would not have been revealed, and it is possible that they both could have been judged as incompetent with regards to the use of this particular language feature (Poehner, 2008). The interaction revealed that the two learners should be awarded different grades because their extent of knowledge of the simple past tense differed. More importantly, it helped one of the learners to go beyond their current ability.

Having discussed the use of interactionist DA for the assessment of speaking, we now turn our attention to how the interventionist (cake) approach can be employed to assess L2 writing skill. As noted above, the interventionist DA focuses on standardised rather than individualised assistance. To make mediation systematic, objective, and easily quantifiable, the mediator has to follow some procedural guidelines that specify the steps that must be taken while scaffolding. Table 1 presents an adapted version of such a mediational procedure designed by Aljaafreh and Lantolf (1994, p. 471)³. Based on this Regulatory Scale, the mediator, in one-on-one interaction with a learner, follows a scale of support starting from the most implicit to explicit feedback. For all learners, the procedure is the same: the mediator starts with step 1 and only proceeds to the following ones when the learner fails to self-correct. As for the scoring, if learners self-correct in earlier steps, they get a better grade than if they do so after the more explicit clues (e.g., step 5).

Table 1

Regulatory scale (implicit to explicit)

1. Give the learner a chance to self-correct prior to the intervention
 2. Indicate the sentence containing the error
 3. Indicate the specific segment containing the error
 4. Indicate the nature of the error (e.g., there is something wrong with the verb tense)
 5. Provide clues to help the learner correct it (this is an irregular past verb)
 6. Provide the correct form
 7. Provide some explanation and examples on the non-target like form
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Source: Adapted from Aljaafreh and Lantolf (1994, p. 471)

The following excerpts, from Nassaji and Swain (2000), give examples of how this Regulatory Scale (Table 1) can be used during the intervention session of an L2 writing assessment. The two episodes (A and B) indicate two mediation sessions conducted to help a learner to self-correct two non-target-like forms in her writing (in line 1, the missing definite articles 'the' Korean and 'the' same). As can be seen in Episode A, the mediator, following the Regulatory Scale (Table 1), starts by indicating that the sentence contains an error (step 1), but since the learner fails to address it, he continues with more explicit assistance until step 5 (i.e., provision of a clue) when the learner is able to self-correct.

Episode A

- 1 T: "Most of Korean have same name". So do you see anything wrong with this sentence?
- 2 S: uhm ... I imagine that ... uhm ... but ... in this position ... I imagine that ... I think it's ok [laughing].
- 3 T: It's ok?
- 4 S: Yes.
- 5 T: ah ... what about this part. "most of Korean". Do you see ... Do you see anything wrong with this phrase?
- 6 S: Most of a Korean ... Korean [whispering] ... mmm ...
- 7 T: Anything wrong within this part [referring to the place of the error]?
- 8 S: Korean?
- 9 T: No.

10 S: No? Uhm ...

11 T: Yes, there is something wrong with this [referring to the word "Korean"].

12 S: Yes. I think ... ah ... Korea means Korean people, yes?

13 T: Ok.

14 S: Yes?

15 T: But grammatically, is there anything wrong?

16 S: Of the? No?

17 T Yes, what?

18 S: Of the?

19 T: The, yeah.

20 S: Yes.

As Episode B shows, upon encountering a similar error (in the use of articles) in the same writing and after the first mediation session, the learner needed only implicit assistance (step 1) to self-correct.

Episode B

21 T: "Most of the Koreans have same name", Do you see anything wrong with this?

22 S: Have the ... same name?

23 T: Ok, yes.

24 S: I'm ... my article is bad [laughing].

The mediator's scaffolding helped the learner to become more self-regulated regarding that specific language feature. From an SCT perspective, learning takes place when learners move from dependence towards autonomy (Swain et al., 2015). It can be argued that this improvement is not significant to teachers and students unless it is sustained or, to borrow a term from Feuerstein et al. (1979), it transcends to new writing tasks. There is compelling evidence indicating that development in grammar knowledge as a result of mediation and scaffolding transcends to new tasks (e.g., Erlam et al., 2013; Nassaji, 2011).

CONCLUSION

Built on the premise that abilities are malleable and social in nature, DA sets itself apart from psychometrically oriented language testing (NDA) by fully integrating assessment and instruction. The teacher/mediator in this approach should use interaction and mediation to gain insights into the depth of learners' knowledge and weaknesses, and from there co-construct a ZPD with a learner in order to promote development.

DA can be administered in two approaches—interventionist and interactionist, and teachers should take into account the features of the two approaches as well as the L2 setting they are working in when choosing one over the other. By and large, interactionist DA, due to its dialogic nature, lends itself better to assessing small classes, or as Poehner (2008) recommends, is suitable for institutions that allow qualitative reports instead of scores. For more standardised tests and for the assessment of large groups, interventionist DA can be more practical, given that it generates scores and percentile ranking (Poehner, 2008). In either case, mediation should be employed to help learners improve and not just complete the task at hand. The quality of mediator-learner interaction is an important factor in determining the effectiveness of DA in promoting development. To offer optimal mediation, teachers should consider the following recommendations made by Feuerstein et al. (1988):

- Fine-tune the interaction to target the learners' ZPD; avoid giving away the answer, instead tap into their potential by scaffolding.
- Encourage the examinee to take up an active role in the mediation process by asking questions and discussing details.
- In case the learner fails to address the issue after the provision of prompts, supplement the correction with examples and explanation.
- Provide emotional support as positive reinforcement.
- Keep in mind the two concepts of 'transcendence' and 'transfer task' when designing post-tests to target not only the matured but maturing abilities.

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Notes

1. Traditional assessment is a general term used by Poehner (2008) to mean any assessment other than Dynamic Assessment.
2. In the IELTS reading test, for instance, there are three passages with the first one the least challenging and the third one the most.
3. Note that this procedure was not originally designed to be used in DA but rather to ensure that mediation is conducted in line with the principles of SCT, i.e., students receiving first implicit and gradually explicit prompts. It, can, however, be adopted for DA since the quantitative nature makes it easier for teachers to assign grades.

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