

Dynamic assessment in the language classroom

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The focus of this paper is on the implementation of Dynamic Assessment (henceforth, DA) in the L2 classroom setting. DA is an approach to assessment and instruction derived from Vygotsky's theory of the Zone of Proximal Development (henceforth, ZPD). In what follows, we will first discuss briefly the concept of the ZPD and its realization in DA procedures; next we will briefly discuss the work of Reuven Feuerstein, whose work on DA is most directly relevant to the goal of the present article (for a discussion of other models of DA, see Lantolf and Poehner, 2004; Sternberg and Grigorenko, 2002); finally, we will compare DA to Formative Assessment (henceforth, FA) and will suggest how FA might be reconceptualized according to DA principles. In the language testing literature, FA is usually contrasted with Summative Assessment on the grounds that the former is intended to feed back into the teaching and learning process while the latter reports on the outcomes of learning (Bachman, 1990: 60–61). Moreover, FA procedures are generally considered to be less systematic and not as high-stakes as summative assessments. Following Rea-Dickins and Gardner (2000), however, we suggest that FA is not necessarily low-stakes and that it can be carried out quite systematically, yielding results that may be more systematic and revealing with regard to learner development than summative assessments.

I Defining DA

Although DA has its roots in Vygotsky's concept of the ZPD, Vygotsky himself did not use the term DA when formulating his proposals on the cultural development of the individual nor when discussing his views on the importance of distinguishing between diagnostic and prognostic

testing in the school and in the laboratory settings. In a paper published more than forty years ago, however, A.R. Luria (1961), one of Vygotsky's most influential colleagues, contrasts 'statistical' with 'dynamic' approaches to assessment (p. 7). The former, according to Luria, although grounded in sound psychometric principles, inappropriately assumes that a person's solo performance on a test represents a complete picture of the individual's capabilities. The latter, on the other hand, argues that a full picture requires two additional bits of information: the person's performance with assistance from someone else and the extent to which the person can benefit from this assistance not only in completing the same task or test, but in transferring this mediated performance to different tasks or tests.

In the preface to their critical review of the research on DA since the time of Luria's publication, Sternberg and Grigorenko (2002: vii) define DA as a procedure whose outcome

takes into account the results of an intervention. In this intervention, the examiner teaches the examinee how to perform better on individual items or on the test as a whole. The final score may be a learning score representing the difference between pretest (before learning) and posttest (after learning) scores, or it may be the score on the posttest considered alone.

While this is a more systematic definition of DA than Luria offers, it fails to capture the full force of how Vygotsky conceived of development in the ZPD. Development for Vygotsky was not specific to a single task or test, as Luria's comments made clear; rather it must take account of the individual's ability to transfer what has been internalized through mediation beyond the immediate task to other tasks. We return to this issue later.

Reflecting Luria's contrast between DA and statistically based assessment, Sternberg and Grigorenko (2002) point out that many working within the DA paradigm have juxtaposed their approach to what they refer to as Static Assessment, which follows more traditional assessment procedures, especially those associated with summative assessment. According Sternberg and Grigorenko (2002: vii), in Static Assessment,

the examiner presents items, either one at a time or all at once, and each examinee is asked to respond to these items successively, without feedback or intervention of any kind. At some point in time after the administration of the test is over, each examinee typically receives the only feedback he or she will get: a report on a score or set of scores. By that time, the examinee is studying for one or more future tests.

Although scholars working in either DA or more traditional psychometric approaches to assessment might quibble with this definition, it seems clear that the fundamental difference between the two approaches has to do with whether or not the administration of the assessment should have the expressed goal of modifying learner performance during the assessment itself. DA, because it is rooted in the ZPD, insists that any assessment that fails to determine the extent to which the person's performance is modifiable is incomplete. Traditional statistically based assessment, on the other hand, because of its grounding in psychometric principles, considers change in the person's performance during the administration of the assessment as a threat to these principles, in particular, test reliability (see Lidz, 1991; Haywood *et al.*, 1990).

II Zone of proximal development

Vygotsky's writings on the ZPD present complexities that often challenge the reader's precise understanding of the construct. Vygotsky's writings reflect three slightly different interpretations of the ZPD (Valsiner and van der Veer, 1993). One was based on his observation that schooling frequently enhanced the IQ score of children entering school with low scores, while it appeared to have virtually no impact on those with high IQ ratings (van der Veer and Valsiner, 1991). Vygotsky reasoned that this differential effect of schooling was a consequence of the fact that children with high IQs had already traversed the distance between their *actual* and *potential* development (relative to what the school curriculum concretely offered) prior to entering school, but that their low IQ classmates still had room for development to occur. In this initial thinking about the ZPD, we find Vygotsky's only attempt to quantify the ZPD as a 'difference score' between what children could do independently and what they could do with assistance on an IQ test. He used this score to convince testers to redirect their efforts from concern with the current state of children's development to prognosis of their potential (i.e., future) development.

Another, and chronologically later, way in which Vygotsky conceptualized the ZPD was much more qualitative in its focus on understanding and promoting those aspects of a child's mental development that were in the process of maturing. He still stressed the centrality of assisted and unassisted performance, but instead of linking this to a difference score, he argued that educators needed to rethink how to connect teaching with

development in a systematic and meaningful way (Valsiner and van der Veer, 1993: 43). In both conceptualizations, Vygotsky was concerned with the pivotal notion that development was an emergent process ‘masked by (easily visible) intermediate outcomes (= actual level of development)’ (Valsiner and van der Veer, 1993: 43).¹

To reiterate, in proposing the ZPD Vygotsky (1998: 201) argued that an individual’s *actual level of development* as determined by independent performance ‘not only does not cover the whole picture of development, but very frequently encompasses only an *insignificant* [italics added] part of it’ (Vygotsky, 1998: 200). He insisted that responsiveness to mediation is indispensable for understanding cognitive ability because it provides insight into the person’s *future* development. That is, what the individual is able to do one day with mediation, he or she is able to do tomorrow alone. Importantly, potential development varies independently of actual development, meaning that the latter, in and of itself, cannot be used to predict the former. Moreover, the former is not an *a priori* prediction but is derived from concrete mediated activity. The following extended quote summarizes Vygotsky’s position on the ZPD and in some ways represents an early description of DA, even though, as we said earlier, Vygotsky himself did not use the term:

Imagine that we have examined two children and have determined that the mental age of both is seven years. This means that both children solve tasks accessible to seven-years-old. However, when we attempt to push these children further in carrying out the tests, there turns out to be an essential difference between them. With the help of leading questions, examples, and demonstrations, one of them easily solves test items taken from two years above the child’s level of [actual] development. The other solves test items that are only a half-year above his or her level of [actual] development.

(Vygotsky, 1956: 446–47, cited in Wertsch, 1985: 68)

For Vygotsky the two children are simultaneously equivalent and not equivalent, as he points out a bit further in the same passage:

From the point of view of their independent activity they are equivalent, but from the point of view of their immediate potential development they are sharply different. That which the child turns out to be able to do with the help of an adult points us toward the zone of the child’s proximal development. This means that with the help of this method, we can take stock not only of today’s completed process of development, not only the cycles that are already concluded and done, not only the processes of maturation that are completed; we can also take stock of processes that are now in the state of coming into being, that are only ripening, or only developing.

(Vygotsky, 1956: 447–48; cited in Wertsch, 1985: 68)

1 The importance of the future

Vygotsky's theorizing on the ZPD is predicated upon a radically different understanding of the future from that which informs more traditional approaches to assessment. To appreciate this difference, we draw on Valsiner (2001), who analyses three ways of construing the future in developmental psychology. In the first, it is excluded altogether as humans are assumed to be atemporal beings who mature rather than develop. Innatist theories of cognition and language are representative of this perspective. The second is a *past-to-present* model that acknowledges 'the role of the past life history of the organism in leading to its present state of functioning' (Valsiner, 2001: 86). Development occurs in a lock-step fashion on its way to some fixed end point. The future is predicted '*post factum* – when it already has become present' (Valsiner, 2001: 86) such that the future is assumed to be a smooth continuation or extension of the past, or as Frank Lloyd Wright's famous dictum puts it, 'The future is now.' Freud's theory of emotional development, Piaget's theory of cognitive development, and, in SLA, Krashen's (1981; 1983) morpheme-order hypothesis and Pienemann's (1998) processability hypothesis are all examples of past-to-present models of development.

The third way of conceptualizing the future is in *present-to-future models*, where focus is on the emergence of novelty. Not only do these models allow researchers and educators to chart out development while it is emerging (this is what 'proximal' means in the ZPD), they also compel researchers and educators to participate actively in the developmental process itself. Concern is with the 'process of the present (actuality), on the basis of anticipation of immediate future possibilities and through construction of reality out of these anticipated possibilities' (Valsiner, 2001: 86). By present, or actual development, Valsiner, echoing Vygotsky, means the person's past development as it is brought into contact with the future. The aim of present-to-future models is to increase the distance between the past and the present, while at the same time decreasing the distance between the present and the future (Valsiner and van der Veer, 1993: 35). Present-to-future models, then, predict the future not *a priori* but on the basis of concrete mediated activity.

DA is very much in line with future-in-the-making models of development. As called for in Vygotsky's ZPD, assessment and instruction are dialectically integrated as the means to move towards an always

emergent (i.e., dynamic) future, rather than a fixed and stable steady state. Bronnfenbrenner (1977: 528), captures this notion nicely in citing an excerpt from a conversation with A.N. Leontiev, an influential colleague of Vygotsky, in which the latter noted that ‘American researchers are constantly seeking to discover how the child came to be what he is; we in the USSR are striving to discover not how the child came to be what he is, but how he can become what he not yet is.’

III The matter of the individual

Sociocultural theory argues that cognitive change arises from ‘the productive intrusion of other people and cultural tools in the [developmental] process’ (Newman *et al.*, 1989: 68). Therefore, the unit of analysis for the study of development is not the individual acting alone, but the interpersonal functional system formed by people and cultural artifacts acting jointly to bring about development. It has been taken for granted in both psychology and education that because cognitive change occurs in the individual, the individual must be the unit of analysis for the study of this process. Individual-based models of development, of course, recognize that the social environment plays a role in development. For instance, in Chomskyan theory the environment provides triggers that enable children to determine the correct core grammar of their language. In input-processing models of L2 development, the environment provides input to the language acquisition device which then processes the input and eventually produces an appropriate L2 grammar. In these models the social environment provides the resources for change, and concern is often focused on how much change should be attributed to the environment and how much to the individual.

In SCT, on the other hand, other individuals and cultural artifacts are not merely ‘a factor of development, not what acts from outside on what is already there, but they are the *source* [italics added] of development’ (Elkonin, 1998: 299). In the following passage, Vygotsky clearly argues against ‘biologizing’ the environment, as often happens in atemporal models of ‘development’:

One of the major impediments to the theoretical and practical study of child development is the incorrect solution of the problem of the environment and its role in the dynamics of age, when the environment is considered as something outside with respect to the child, as a circumstance of development, as an aggregate of object conditions existing

without reference to the child and affecting him by the very fact of their existence. The understanding of the environment that developed in biology as applied to evolution of animal species must not be transferred to the teaching on child development.

(Vygotsky, 1998: 198)

DA is not concerned with how much development can be attributed to the individual and how much to the environment. This is an irrelevant question. The individual and the environment form an inseparable dialectical unity that cannot be understood if the unity is broken. As Vygotsky often said, if we want to understand the property of water that allows it to extinguish fire, we cannot reduce it to its component elements – oxygen and hydrogen.

IV Interpretations of the ZPD in DA research

There are two general approaches to DA, both of which can be traced to the different contexts in which Vygotsky discussed the ZPD (see above). The first, which we term *interventionist* DA, is rooted in Vygotsky's quantitative interpretation of the ZPD as a 'difference score'. It is currently implemented in either of two formats: a pretest–treatment–post-test experimental approach; providing item-by-item assistance selected from a prefabricated menu of hints during the administration of a test. Interventionist DA is strongly psychometric in its approach to assessment and is not directly relevant to our current aim of linking DA and FA; consequently, we will not consider it further here. The interested reader can consult the following references, among others: Lantolf and Poehner, 2004; Sternberg and Grigorenko, 2000; Guthke and Beckmann, 2000.² The second approach to DA, and the one we will focus on in the remainder of this article, we refer to as *interactionist* DA. It finds its origins in Vygotsky's second, qualitative, interpretation of the ZPD – one that foregrounds instruction-learning over measurement (see Lidz and Gindis, 2003: 105).

In Minick's (1987) critical review of DA research, he argues that the ZPD should not be used as a measure of learning potential and efficiency, as proponents of interventionist DA suggest. In his view, Vygotsky's understanding of the concept is as 'a means of gaining insight into the kinds of psychological processes that the child might be capable of in the next or proximal phase of development and a means of identifying the kinds of instruction, or assistance that will be required if

the child is to realize these potentials' (1987: 127). In Vygotsky's words, 'we must not measure the child, we must interpret the child' and this can only be achieved through interaction and co-operation with the child (Vygotsky, 1998: 204). It is this more clinical perspective on the ZPD that underlies the interactionist approach to DA.

Perhaps the leading advocate of interactionist DA is Reuven Feuerstein (see Feuerstein *et al.*, 1979; 1980; 1988; 2003). Feuerstein's approach to DA is anchored in his theory of Structural Cognitive Modifiability, which bears a striking resemblance to Vygotsky's construal of the ZPD. Accordingly, human beings are 'open' rather than 'closed' systems, meaning that cognitive abilities are not fixed traits determined by our genetic endowments in the way height and eye colour are, but rather they can be developed in a variety of ways, depending on the presence – and the quality – of appropriate forms of interaction and instruction (Feuerstein *et al.*, 1988: 5). Following a future-in-the-making model, Feuerstein argues that most education systems continue to assume that a learner's *future* functioning can be perfectly predicted on the basis of his *present* performance, 'ignoring a possibility that the predicted destiny may not materialize if powerful intervention takes place' (Feuerstein *et al.*, 1988: 83). Feuerstein *et al.* (1979) therefore propose that traditional conceptualizations of the examiner/examinee roles should be abandoned in favour of a teacher-student unity that works towards the ultimate success of the student. They write that 'it is through this shift in roles that we find both the examiner and the examinee bowed over the same task, engaged in a common quest for mastery of the material' (1979: 102). Reminiscent of A.N. Leontiev's comparison of the Soviet and American educational systems, Lidz and Gindis (2003: 103) poignantly underscore Feuerstein's observation: 'traditional standardized assessment follows the child's cognitive performance to the point of "failure" in independent functioning, whereas DA in the Vygotskian tradition leads the child to the point of achievement of success in joint or shared activity.'

At the heart of Feuerstein's approach is the 'Mediated Learning Experience (MLE)' – a construct mirroring Vygotsky's (1978) understanding of mediation. Feuerstein describes the MLE as a process through which environmental stimuli do not impact directly on the organism but are filtered through some other person, usually an adult mediator, who selects, frames, modifies and imposes order on the stimuli

to ensure that 'the relations between certain stimuli will be experienced in a certain way' (Feuerstein *et al.*, 1988: 56). Sternberg and Grigorenko (2002: 54) point out that the mediator not only modifies the stimuli or task but also affects the learner by 'arousing him or her to a higher level of curiosity and to a level at which structural cognitive changes can occur'. For example, an adult watching a TV programme with a child may mediate the programme by explaining what the child is seeing. Also paralleling Vygotsky, Feuerstein understands mediation as 'the psychological component of cultural transmission' (Feuerstein *et al.*, 1981: 271). Unlike Vygotsky, however, Feuerstein assumes that some types of learning are non-mediated or direct, as for example when a child is watching a TV programme alone.³

Feuerstein *et al.* (1988) outline 11 MLE components, of which the most relevant to the present discussion are intentionality, reciprocity and transcendence. Briefly, *intentionality* refers to the adult's deliberate efforts to mediate the world, an object in it, or an activity for the child, and for Feuerstein this distinguishes the MLE from the haphazard, incidental nature of traditional instruction; that is, instruction that fails to take account of the ZPD. *Reciprocity* describes the interaction between the learner and the mediator since the actions of both are necessarily intertwined. During an MLE session the learner is not a passive recipient of knowledge but an active co-constructor of it. *Transcendence* relates to the goal of the MLE: bringing about the cognitive development required for the child to move beyond the 'here-and-now' demands of a given activity. Feuerstein *et al.* (1979: 92) argue that true development *transcends* any specific task and manifests itself in a variety of ways under a multitude of differing conditions. It is for this reason that the MLE typically proceeds from an initial training phase on a particular problem to the tackling of 'a series of tasks that represent progressively more complex modifications of the original training task' (1979: 92). Feuerstein reasons that the structuring of the MLE to include tasks that vary in their level of difficulty and complexity require of learners the same kinds of adaptations that will be expected of them in daily life.

V Interactionist DA in the educational setting

Newman *et al.* (1989) conducted an extensive study of development in the classroom setting within the theoretical framework provided by

the ZPD. They make an important distinction between assessment *by* teaching, which for them is dynamic assessment, and assessment *while* teaching, which is not. According to these researchers, in traditional classroom instruction, children move through a ‘learning hierarchy’ composed of ‘a sequence of increasingly difficult tasks’ (1989: 77). Determining how successful the children are at moving through the sequence is often derived from their independent performance on traditional assessment instruments (e.g., achievement tests) at a particular stage in the teaching sequence (1989: 77). In assessment-by-teaching environments, instruction is not organized according to ‘a neat sequence of levels to be mastered in an invariant sequence with a single correct route to mastery’ (1989: 78). To be sure, tasks and knowledge may be organized according to a teacher’s assumptions about their relative complexity; however, once teachers and students engage in instructional activity, things can move in unanticipated directions and at unanticipated rates (see Coughlin and Duff, 1994 on the difference between task and activity) and the teacher needs to be prepared to provide appropriate types of mediation and to know when to withdraw this mediation as the learners begin to mediate themselves. As Newman *et al.* (1989: 87) caution, however, when mediation is removed, the teacher must remain at the ready to pick up the learners ‘when they do slip over the edge of their competence’. Although instruction is not sequenced in the same way that it is in traditional classrooms, this does not mean that there is no goal towards which instruction moves, but rather that the outcomes and the means to achieve them will vary (see Newman and Holzman, 1993 on development as creativity and transformation).



VI DA and L2 development

We will illustrate how interactionist DA procedures unfold in concrete practice. The first example is taken from an early study on negative feedback and mediation reported in Aljaafreh and Lantolf (1994). While this study is not specifically situated within a DA framework, it is based on the ZPD and as such it provides relevant insights into the DA process. Indeed, as the authors comment, ‘the process [of jointly working out appropriate mediation] is thus one of continuous *assessment* of the novice’s needs and abilities and the *tailoring* of help to those conditions’ [*italics in original*] (1994: 468). The second example is

from Poehner's (in progress) research that is specifically framed within interactionist DA.⁴

1 Aljaafreh and Lantolf: mediation in the ZPD

The focus of Aljaafreh and Lantolf's (1994) study was on the use of English tense, articles, prepositions and modal verbs by three adult ESL learners. One of the researchers met with the students individually on a weekly basis for a period of eight weeks and helped them to revise written compositions that they had prepared for their ESL class. The researcher functioned as a tutor whose role was to interact with the students in order to help the learners to develop their control over the relevant grammatical features. The tutor did not approach the interactions with a prepared menu of hints and leading questions; rather, he provided the appropriate feedback and mediation negotiated with each learner with the aim of promoting language development. Therefore, when two learners had the same problem, the feedback and mediation was individualized according to each learner's responsiveness to the tutor's attempts to help. The only procedure that was pre-established in this regard was that the tutor consistently began the interactions by offering first implicit rather than explicit mediation. This point is illustrated in excerpts (1) and (2) taken from two different students. In both cases, the dyads focus on use of the article 'the' with 'United States'.

- (1) (T)utor: ... There's also something wrong with the article here. Do you know articles?
- N: Articles, yes.
- T: Yeah, so what's ...
- N: Eeh on my trip to ...
- T: What is the correct article to use here?
- N: Isn't *to* is ... no ... eeh ... article?
- T: What is the article that we should ...
- N: It.
- T: No. Article ... You know the articles like *the* or *a* or *an*
- N: The trip ... my, is not my? No ... the trip?
- T: My ... yeah it's okay, you say my trip.
- N: My trip.
- T: Okay.
- N: To United States
- T: Yeah, USA, what article we need to use with USA?
- N: *A, an, the*
- T: *The*, which one?

N: But *the*?

T: Okay, do we use *the* ... preparing my trip to ... *the* USA?

N: Aaah ah (utters something in Spanish) ah, okay when I use when I use USA use with article

T: okay.

(Aljaafreh and Lantolf, 1994: 473)

- 2) T: 'In the same day I mailed them ... to ...' okay alright. What about also ... is there something else still in this sentence?

F: to the.

T: Hum?

F: the

T: okay, 'to the' ... yeah, 'to the US.'

(Aljaafreh and Lantolf, 1994: 474)

The same mistake in using the definite article has a different underlying status relative to each learner, which is brought out by the interaction with the tutor. In (1) the learner at first affirms that he knows what articles are, but further interaction reveals that he does not understand the concept and he even has difficulties in locating the site of the problem. Eventually, the tutor leads the learner to formulate his own explicit rule for use of 'the' with United States. The second learner (2) requires less mediation and is able to self-correct on the basis of the tutor's leading question.

Excerpts (3) and (4) illustrate development over time in the same learner, as manifested in responsiveness to mediation rather than actual language production. The problem at issue is tense marking in the modal phrase '*I called other friends who can't went do the party.'

- 3) T: Okay what else? ... what about the verb and the tense? the verb and the tense ...

F: Could

T: Okay, here.

F: Past tense.

T: Alright, okay, 'who [alright] could not.' Alright? And? ...

F: To.

T: Here [points to the verb phrase], what's the right form?

F: I ... go.

T: Go. Okay, 'could not go to [that's right] to the party ...'

(Aljaafreh and Lantolf, 1994: 479)

In (3) F had initially inflected the main rather than the modal verb for past tense. The tutor calls her attention to the problem without indicating its precise nature. The learner responds with the correct form of the modal 'could' but fails to produce the correct form of the main verb 'go'.

The tutor first prompts F with a leading question, 'And?'. The learner responds by correcting the misspelling of 'do' to 'to'. The tutor then points directly to the main verb while at the same time using verbal deixis 'here' and asks F a direct question about the verb form. F then produces the correct 'go' and the tutor recasts the verb phrase.

One week later, the problem resurfaces and the dyad once again attempts to resolve the matter. This time, however, the tutor's mediation is less explicit.

- 4) T: Is there anything wrong here in this sentence? 'I took only Ani because I couldn't took both' ... Do you see anything wrong? ... Particularly here 'because I couldn't took both'
- F: Or Maki?
- T: What the verb verb ... something wrong with the verb ...
- F: Ah, yes ...
- T: That you used. Okay, where? Do you see it?
- F: (points to the verb)
- T: Took? okay.
- F: Take.
- T: Alright, take.

(Aljaafreh and Lantolf, 1994: 479)

At first F assumes the tutor's question is directed at the meaning of the sentence and responds by clarifying the identity of the other person included in the scope of 'both'. The tutor then indicates that there is something wrong with the verb and asks the learner to indicate specifically the location of the problem. F then points to where the problem is, which the tutor verifies, at which point F responds with the correct, uninflected form of the main verb, 'take'. It is important to note that in (4), unlike in (3), it is the learner and not the tutor who points to the correct problem area. Even though the learner required explicit mediation to correct the problem, the assistance was less explicit than in (3). Aljaafreh and Lantolf argue that the change in the quality of the mediation required from (3) to (4) manifests learner development through the ZPD. To be sure, the goal of such interaction is independent performance and, indeed, Aljaafreh and Lantolf (1994) provide examples where the learners improve their ability to use the relevant grammatical features of English over the course of time. Moreover, Lantolf and Aljaafreh (1995) show, as Vygotsky (1987) argued, that development in the ZPD is not a smooth and predictable process but is 'revolutionary' in the sense that it entails both progress and regression. Thus, the same

learner may respond appropriately to mediation on one occasion and inappropriately on another until he or she is able to gain full control over the feature in question.⁵

2 Poehner: DA in advanced L2 French

Poehner (in progress) conducted a series of DA case studies focusing on spoken language ability among advanced undergraduate learners of French. Paralleling Antón's (2003) study in Spanish, participants were asked to construct orally a past-tense narrative in French after watching a short video clip. During their first recounting of the narrative, the learners received no feedback or mediation. They were then shown a second clip and asked to repeat the task, but this time they interacted with a mediator who offered suggestions, posed questions, made corrections and helped them think through decisions concerning selection of lexical items, verb tense and other language difficulties. Based on Feuerstein's clinical approach to DA, the mediation offered was highly flexible, emerging from the interaction between the student and the mediator; that is, the quality and quantity of mediation were always contingent upon a learner's responsiveness. Again drawing on Feuerstein's model, these assessments were used as the basis for an individualized instructional programme, in which participants were tutored in areas that had been identified during the DA sessions as needing special attention. Various materials, including charts, diagrams and model sentences were used in conjunction with detailed explanations as learner and mediator co-constructed a series of narrations, both in spoken and written form. After approximately six weeks of tutoring, involving two sessions per week, the participants were re-administered the original independent and mediated narration tasks so that any development during the enrichment programme could be observed.

In the following excerpt, one participant, Sara (S), is struggling with both the selection of an appropriate verb tense as well as the morphological formation of that tense. Sara has just watched a clip from the film *Nine Months* in which Julianne Moore's character tells her boyfriend, Hugh Grant's character, that she is pregnant. Sara uses the French verb *croire* (to believe) to indicate that the boyfriend cannot believe the news. As this assessment was conducted dynamically, Sara receives help from the mediator (M). Note that the mediator spoke in English rather than

French. Given that the participants in this study varied greatly in terms of their abilities in the L2, use of English to mediate their performance helped to ensure that the students understood M's prompts and suggestions. Obviously, if there had been any doubt that a student understood the mediation being offered, any interpretation of her responsiveness or lack of responsiveness could have been called into question. Vygotsky (1987: 223) clearly recognizes the importance of the first language in mediating the internalization of additional languages.

- 5) S: elle est enceinte elle est oh d'accord, Julianne Moore elle est enceinte de la
/She is pregnant she is oh okay Julianne Moore she is pregnant with the/
bébé (laughs) de la bébé de Hugh Grant mais Hugh Grant ne croit pas pour—
/baby (laughs) with Hugh Grant's baby but Hugh Grant doesn't believe for—/
M: but in the past
S: n'a croit pas*, n'a croyé pas*
/didn't believe, didn't believe/
M: yeah um (...)
S: uh j'oublie
/uh I forget/
M: right because it was more a description [of him right?
S: oui] alors il est imparfait
/yes so it is imperfect/
M: voilà voilà so you would say?
S: je sais je sais mais je n'ai pas le used imparfait pour beaucoup de fois alors (...)
/I know I know but I haven't used the imperfect in a very long time/
M: il ne croyait pas
/he didn't believe/
S: il ne croyait pas et uh um il fait l'accident de son voiture
/he didn't believe and uh um he has an accident with his car/

Sara initially uses the present tense of the verb *croire* (croit), and this elicits a prompt from M reminding her that the narrative should be in the past. In this particular instance, given what follows in the story and the connection between the events, M reminds Sara to use *croire* in the past tense, which means she must choose between imperfect and perfect aspect. Sara, however, responds by changing the verb, not to the appropriate *imparfait*, but to the *passé composé*. What is more, in forming the perfective she creates an inappropriate past participle (*cru*) and in addition fails to properly frame her utterance as a negative (with *pas* immediately following the auxiliary *a*). M then reminds Sara that the utterance she is attempting to construct is a description of the speaker's state of mind. This is a sufficient hint for Sara to recognize that the verb should be framed

as an imperfect. She admits, however, that she is unable to form the *imparfait* of *croire*, and the mediator ultimately provides the correct form.

The above excerpt is characteristic of Sara's performance during her initial DA session. Her control over the past tenses in spoken French appeared to be quite limited – she was aware that it is necessary to distinguish between the *passé composé* and the *imparfait* but she had difficulty in making a choice and in marking the corresponding morphological features. During Sara's second DA (following the enrichment programme), the verb *croire* appeared once again. This time, however, Sara appeared better prepared to use the verb.

- 6) S: enceinte, elle était enceinte avec le bébé de Samuel et Samuel n'a pas croyé* et pose
 /pregnant, she was pregnant with Samuel's baby and Samuel didn't believe it and asked/
 pour le moment il a um (...)
 /for the moment he uh (...)/
- M: oui, le verbe there's something there with the verb, you just used the
- S: imparfait (?)
- M: what was it?
- S: croyé*
- M: n'a pas croyé* using the
- S: n'a pas la croyé* did not believe at that time
- M: using passé composé?
- S: yes
- M: right so then it's not n'a pas croyé but n'a pas (...) do you remember? it's irregular
- S: croit*?
- M: uh
- S: it's cru
- M: cru
- S: see I remember that
- M: exactly n'a pas cru
- S: yeah ne l'a pas cru did not believe it ne l'a pas cru

While it is true that Sara still required mediation to produce the correct form of *croire*, the type and amount of assistance changed from her first session. This time, her selection of the *passé composé* correctly fits with the rest of the story and her framing of the events. In this instance, though, she still struggles to produce the appropriate past participle, *cru*. Interestingly, when M draws her attention to the verb, she inappropriately interprets it to mean that she has chosen the wrong aspect, and she reacts with surprise and even defends her choice by offering an

explanation. Moreover, once the past participle was identified as the source of error, M reminds Sara that it is an irregular form, which is sufficient for her to produce the necessary *cru*. In fact, Sara even correctly inserts the direct object pronoun *l'* into her revised utterance. According to Poehner's analysis of Sara's initial and follow-up sessions, she moved from a simple awareness of tense and aspect to a more nuanced understanding of how each can be used to create relationships among events in a story, and she seems to have a better grasp of how to produce the appropriate verbal forms, even though she is not always able to do so independently. Thus, over the course of the sessions, Sara moved forward in her ZPD as a result of internalizing the mediation offered during the interactions in both the DA and tutoring sessions.

Another participant considered in Poehner's study, Amanda, also exhibited problems controlling the *passé composé* and the *imparfait* during her initial DA session. Amanda's responsiveness to mediation, however, was markedly different from Sara's. Unlike Sara, Amanda improved her performance during a single DA session after some prompting from the mediator. In constructing her narrative, Amanda relied on the present tense and the *passé composé* and avoided the *imparfait*. However, her use of the *passé composé* was not always appropriate. It seems that Amanda was unable to sustain her use of the past and consequently shifted to the present to relate the story. In the excerpt below, M intervenes to reorient her to the task.

- 7) A: les gens qui voudraient les enfants (...) ils ont besoin d'être préparé? pour leur /people who would like kids (...) they need to be prepared? for their/ responsabilité d'avoir les enfants et, on a l'idée que il n'a voulu pas* uh n'a pas /responsibility of having children and, you get the impression that he didn't want uh didn't/ voulu la responsabilité pour les enfants maintenant mais pendant il /want the responsibility for children right now but while he/
- M: yeah uh right he so remember you've got the two past tenses right? Okay
- A: pendant il a parlé* Rebecca a dit qu'elle qu'elle a enceinté* et uh /while he spoke Rebecca said that she that she was pregnant and uh/

Amanda is not responsive to M's initial prompt – the reminder that there are two principal past forms in French. She picks up her narration and continues to avoid the *imparfait* even when it is clearly needed, as in *être enceinte* (to be pregnant). M interrupts again, this time explicitly naming the two tenses she should use and calling her attention to the fact that

there is a difference between them, although he does not explain what this difference is.

- 8) M: I'm just going to kind of interrupt you there for a minute and ask you to go back and renarrate it again and this time keeping in mind for example the difference between the two major past tenses in French, the *passé composé* and the *imparfait*
- A: Rebecca et Samuel conduisaient à la maison de leur ami Sean et pendant le /Rebecca and Samuel were driving to their friend Sean's house and during the/ voyage Samuel a dit que les gens qui qui avaient les enfants doit être prepare /trip Samuel said that people who who had kids must be prepare/ préparé pour leur responsabilité /prepared for their responsibility/

Following M's hint, Amanda shows that she is able to incorporate both the *imparfait* and the *passé composé* into her story and that she does in fact have some control over these tense-aspect features of the language.

While acknowledging that Amanda's performance was clearly not perfect and that she continued to make some tense-aspect mistakes, Poehner argues that it would be erroneous to conclude that Amanda had no understanding of the alternatives for marking tense-aspect in French, as would have likely been concluded from an assessment of her independent performance. The significance of this episode is that it was only through interaction with the mediator that Amanda's understanding of, and control over, French tense-aspect morphology was revealed. Compared to Sara, then, Amanda had a much more developed ability to use French for narration. In Sara's case, the interaction between mediator and learner helped to identify areas on which subsequent instruction should be focused. With Amanda, mediation revealed that her control of French tense-aspect was greater than it appeared at first glance.

VII DA and formative assessment

Formative assessment is often positioned in contrast to summative assessment. Summative assessment evaluates performance at the end or the beginning of a unit of study, a course, or a programme and is often used for purposes of accountability, admission decisions, promotion and selection (see d'Anglejan *et al.*, 1990; Torrance and Pryor, 1998). While our focus here is on FA, we are struck by the general assumption that summative assessment somehow captures the culmination of the learning process, at least as it is defined by a given curriculum. From our

perspective, there is no reason why even assessments administered at the end of a course or programme could not be forward-looking and thus promote development. In other words, given our theoretical framework, assessing without mediation is problematic because it leaves out part of the picture – the future – and it is difficult to imagine an assessment context that is *not* interested in the future (for additional discussion of this important point, see Lantolf and Poehner, 2004).

Formative assessment occurs during a course of study and has traditionally been used to gather

information which will inform teachers and students about the degree of success of their respective efforts in the classroom. It allows teachers to diagnose students' strengths and weaknesses in relation to specific curricular objectives and thus guides them in organizing and structuring instructional material.

(d'Anglejan *et al.*, 1990: 107)

Based on a series of teacher interviews, Rea-Dickins and Gardner (2000: 229–30) conclude that FA serves teachers in four different ways: it helps them plan and manage their teaching; it provides evidence of student learning; it indexes the extent to which they and their students have attained what has been prescribed in the curriculum; and it provides them with evidence for evaluating their own teaching. Despite the perceived benefits of FA, Rea-Dickins and Gardner (2000: 231) express concerns about its validity and appropriateness, particularly because as a knowledge base, FA has remained an informal procedure rather than being systematically integrated into the curriculum and classroom practices. In addition, FA might also serve to motivate learners by providing them with feedback about what they can already do and what still needs improvement (Vandergrift and Bélanger, 1998: 572).

According to Rea-Dickins and Gardner (2000: 215), although researchers and educators have for some time acknowledged 'the pedagogical function of assessment', an insufficient amount of detailed research has been conducted on this topic. Moreover, Dann (2002: 142) points out that even in the general assessment literature, where a fair amount of research has been conducted on FA, focus has been on 'the ways in which teachers have tried to inform their own practice so that pupils' needs are more specifically met' and much less attention has been paid to 'the ways in which pupils participate in this process'. This is an important area for classroom research to address because, as Rea-Dickins and Gardner (2000: 237) caution, despite assumptions to the contrary,

classroom assessment is not necessarily low-stakes: high-stakes decisions are often predicated on learners' in-class performance. The problem is that because it is generally informal and unsystematic, FA may either over- or underestimate learner ability and progress, resulting in inappropriate instruction or no instruction at all when it is in fact required (2000: 238). DA minimizes the risk of an erroneous evaluation, by definition. It provides mediation that is constantly adjusted and attuned to the learner's or group's responsiveness to mediation. At the same time, it promotes the very development it seeks to assess in the first place.

1 Types of FA

Ellis (2003: 312) makes a useful distinction between 'planned' and 'incidental' FA. The former entails direct testing of learners' language knowledge and/or ability to perform specific tasks, and frequently uses a rating scale to assess progress or to compare learners to each other (2003: 312). Incidental FA is implemented through the instructional conversations that arise between teachers and students during normal classroom pedagogical activity (Ellis, 2003: 314). Ellis distinguishes two types of incidental FA – internal and external. The former occurs 'through teacher questioning and probing' and provides learners with online feedback on their performance as it is unfolding. According to Ellis (2003: 314), internal incidental FA contributes directly to the accomplishment of a particular task, while at the same time contributing *indirectly* to language development, presumably because it 'helps learners to construct a notion of the target standards towards which they strive and enables them to compare their actual performance with the desired performance' (2003: 315). The hallmark of external incidental FA, on the other hand, is teacher and student reflection on learner performance, either while an activity is underway or after it has been completed. Our focus in the remainder of the paper is on incidental internal FA and how a DA perspective can result in more systematic instruction/assessment that promotes development during instructional conversation between teachers and learners.

2 FA in the classroom

Rea-Dickins (forthcoming) studied the interactions between teachers and students in which FA procedures were used by content area teachers

as well as language support specialists working with six- to seven-year-old EAL (English as an additional language) children in the UK. She analyses a rich and revealing set of interactions between a language support teacher and the children working in small groups on activities aimed at understanding and producing English phonological segments. The language support teacher's way of interacting with the students is not consistent. At times, she appears to be primarily interested in completing the lesson as set down in the prescribed curriculum and getting the students through the task. At other times, she seems to draw students into a much more interactive learning activity. In one lesson, students were to produce words with the word-initial /kr-/ cluster (e.g., crush and crisp) and then to write down sentences containing these words. When one student failed to spell a word with the requisite cluster, the teacher simply wrote it down for him. At another point in the interaction, another student had problems articulating the word 'crips', pronouncing it first as 'clips' and then self-correcting to 'clisp'. The teacher interrupted the student's struggle and asked a question using a name that the student had invented and in fact had pronounced correctly a bit earlier: 'Mr Crunchy Crisp, yes, what can he do?' The student then began to think, signalled by a filled pause 'um-', but the teacher did not allow him to formulate his own response and instead provided one in the form of a question – 'Can creep?' The student then repeated the entire sentence as 'Mr Clunchy Clips can cleep.' The teacher's response was to ask the students in the group if they could write the sentence, which another student did successfully. As Rea-Dickins points out, the value the teacher's interventions 'in relation to learner language awareness and development' and their understanding of the /kr-/ cluster was not at all clear. Thus, the interaction failed to 'provide learners with much of an opportunity to explore what they are learning'.

Another language support instructor, working on vocalic sequences using flashcards, also was concerned with completing the activity but, unlike in the first example, he managed to scaffold the activity to make it more manageable for the students to complete, while at the same time encouraging them to self-evaluate. According to Rea-Dickins, this teacher allowed the students to self-manage, and in general the entire interaction promoted more learner reflection by providing 'more space to engage in the activity, socially as well as metacognitively', as when one student said 'I know that one, moon' and another recognized when

he had correctly completed the activity. Moreover, the teacher engaged the students in more strategic questioning than in the first episode. Thus, when one student mentioned that he did not have an /n/ in his flashcards, the teacher responded with 'Haven't you? I can see one' rather than pointing it out directly to the student.

Rea-Dickins concludes that the second episode entails more of a 'learning-focused' assessment than the first. We agree with her analysis. But as can be seen from the two examples considered here, FA seems to be a hit-or-miss process that varies from teacher to teacher and presumably even for the same teacher from episode to episode (see Torrance and Pryor, 1998). The teachers in the above examples are not intentionally attempting to negotiate a ZPD. While this may be a consequence of teachers having to juggle several competing agendas beyond language development, including complying with curricular objectives and reporting to external stakeholders (Rea-Dickins, forthcoming), it is also, in our view, the result of an unsystematic approach to and an incomplete understanding of the process through which learner development takes place. This situation in turn is likely to make it difficult for learners to understand the relevance of particular activities and teacher feedback during these activities for their own development. We must not overlook the fact that successful interaction in the ZPD depends equally on teachers and learners working collaboratively towards a common goal – learner development. Rea-Dickins (forthcoming) then wonders if teachers, because of the reasons just mentioned, are 'inadvertently ... creating whirlpools for their learners', in which students must struggle to ascertain whether their teachers want them to interact and offer and receive assistance – a learning focus – or if they should assume a more formal and individualistic orientation – an assessment focus.

From a DA perspective, what is most interesting about this question is the implicit bifurcation between assessment and instruction. That is, these remain two separate activities even though they may be jointly carried out; the fact that assessment might be embedded within instruction does not obscure the teacher's focus on either one or the other activity, and students must learn to gauge accurately the focus of the day. The express goal of DA, however, is to unify assessment and instruction into a single activity, the goal of which is learner development. Interestingly, Rea-Dickins concludes her study with the assertion that assessments may provide opportunities for learning to occur and, moreover, that

some learners may be aware of the learning potential of assessment activities. This statement nicely underscores the primary difference between DA and current approaches to formative (and for that matter summative) assessment – in the latter, learning is a potential consequence that is sometimes unintended. We address this matter further in the following section.

3 From FA to DA



Torrance and Pryor (1998), following a close analysis of a series of teacher–student classroom interactions, observe that teachers may create ‘good openings’ to promote learner development but, owing to a lack of a theoretical understanding of the processes of development and their relation to instruction, they rely on intuition, a ‘commitment to child-centered “gentleness”’ and extrinsic rewards, with the result that while interactions are managed the teacher often fails to actually intervene in the developmental process (1998: 91). Torrance and Pryor at the same time acknowledge that this type of behaviour is likely to impact on learning, ‘intended or not’ (1998: 91), in much the same way as the hit-and-miss approach discussed in Rea-Dickins’s research. The problem is that the teacher is not likely to appreciate or even see what is happening because of a lack of ‘understanding of the relationship of assessment to learning’ (1998: 91). This circumstance is clearly illustrated in the following excerpt from a teacher–student interaction documented by Torrance and Pryor. The protocol centres on a grade two teacher (T) who provides feedback to a student, Timmy (Tim), on his recent spelling test.

- 9) T: here we are – Timmy Patner
 Tim: I knew I’d got nine or eight – or something like that =
 T: = six
T looks directly at Timmy, who does not meet his gaze.
 T: – did you f\–find it a bit of trouble then?
 Tim: yeah
 T: which bits did you find did you find the four extra words a bit difficult did you?
Timmy nods.
 T: OK shall we look at those then – difficult – you nearly got right – there should be an ell there
T writes in book.
 Tim: cut

- T: yes you've got difficut with an ell it goes cult you see –
T looks up at Timmy again, who still does not look at him.
- T: OK – and s\ night was fine – ffamily you had one go and crossed it
 out – tried again and gave up – yes
- Tim: no it's just I didn't get enough time to do it =
*As he speaks Timmy makes a circular motion with his right hand which he
 then withdraws again behind his back.*
- T: = oh dear never mind yes – we were a bit rushed yesterday weren't we – am/i/ly
T writes as he is saying this.
- Tim: yeah I was going to do that but I couldn't – >(**)<
*Timmy points to where the T is writing as he says this. He then withdraws his
 hand again.*
- T: >oh< were you – oh well never mind because –
T looks up at Timmy who this time meets his gaze.
- T: it was possibly my fault – for not giving you as much time as we had
 last week – but – and surprise –
T writes in book again.
- T: we need to just – that was one of the hardest wasn't it surprise – OK and
 friends – a little aye – do you think – do you have a good practice of these
 words – did you?
- Tim: yes
- T: good – all right so you tried your hardest – that's all I want you to do –
 try your hard\

(Torrance and Pryor, 1998: 89–90)

The teacher provides the correct spellings for the student accompanied by an explanation of the student's poor performance – a lack of time. No indication is given that Timmy has emerged from this interaction with an increased understanding of how to spell words similar to those on the test (i.e., that he has developed), nor is there any evidence that the teacher has discovered much about his spelling ability.

Had the assessment been carried out dynamically, it would have looked quite different on a number of counts. T began the interaction by asking Timmy which words he found difficult to spell but then he recast his question midstream into to a yes–no question, which he answers himself – the four extra words were the ones that Timmy had struggled with. From a DA perspective, it would have been more appropriate for T to have asked the information question and then used Timmy's response as a springboard for launching into a deeper and more systematic analysis of the problem. T, for example, could have directed Timmy's attention to a particular problem word such as **difficut* and asked if Timmy noticed anything wrong with its spelling. Instead, T simply corrected the mistake by first informing Timmy that an 'ell' is

missing and then inserting the missing letter on his behalf. It is noteworthy that Timmy correctly identified the part of the word he had misspelled, which suggests that he may have been able to self-correct if given the chance.

T's discussion of the next spelling error, involving the word *family*, is also worth considering. T again suggests that a lack of time was the source of the error and takes some of the responsibility for the mistake for not having allotted adequate time. In a DA procedure, however, T could have offered Timmy the opportunity to re-spell the word, offering hints and suggestions as necessary. Indeed, Timmy's comment that he was 'going to do that' could have been legitimated by giving him the chance to do so. In dismissing this potentially significant response, T lost an opportunity to discover the true source of the problem, necessary information if the student is going to be helped. Finally, in the case of *friends*, T does not interact with Timmy at all but simply identifies the error and provides the correct solution. The teacher concludes the session with a final act of 'gentleness' and praise, commending Timmy for making an effort, but as Torrance and Pryor (1998: 90) interestingly point out, this is affiliated with the learner's failure rather than his success. Indeed, there is no opportunity for Timmy to transform his failure into success. Equally important, the teacher gained little systematic knowledge of the student's actual spelling ability, which is indispensable in negotiating the appropriate type of mediation to promote development.

The fact that the teacher failed to help Timmy to develop his understanding of the principles of English orthography during their interaction is indicative of the teacher's own view of the assessment task. The goal of working in the ZPD is not simply to help learners to master a specific task but to help them to develop a principled understanding of the object of study that will enable them to transfer from the given activity to other activities. Consequently, the mediation that is negotiated between instructors and learners should not be directed at just 'getting the learner through' the task, but at preparing them for future tasks. This is an important point to keep in mind, as we now turn to the work of Leung and Mohan (2004).

Leung and Mohan investigated classroom assessment practices in which two language teachers adopted a formative rather than a traditional test-based assessment to evaluate their students' reading comprehension. In particular, the teachers assessed their learners in groups, and encouraged

the students to develop responses collaboratively, discuss and debate their merits, and reach a decision. Specific attention was paid to learners' attempts to scaffold each other as they participated in a decision-making process.

During one interaction, the instructor, Andy, assists students as they tried to agree upon the most important sentence in a reading passage about the Saxons and King Arthur and pushes them to reason their way through their selection. He asks the students which sentence they feel is the most important, but he does not accept the group's answer, offering instead the following question, 'Or do you think there's a more important fact?' to which the students respond affirmatively. Next he asks the learners who this fact concerns and they correctly respond 'King Arthur'. Andy then leads the students to consider why King Arthur is important in the text. They respond on the basis of their encyclopaedic knowledge that Arthur is the king, a ruler, and only when Andy reminds them that they must base their answers on the information supplied in the text, does one of the students comment that the achievement Arthur is recognized for in the passage is his victory over the Anglo-Saxons. Leung and Mohan contrast this interaction with standardized assessment practices, appropriately pointing out that in a traditional testing context the learners' response would have been marked 'incorrect' and that, since they would likely have not received any additional feedback, a learning opportunity would have been lost. The authors go on to argue that Andy's intervention not only helped the learners to complete the task correctly, it also illustrated for them the point that they must have reasons to support their answers. According to Leung and Mohan (2004: 16), Andy's scaffolding activity was successful because it

implied a commitment firstly to the view that deciding rather than guessing was important, secondly that answers were not sufficient in themselves, but needed to be supported by good reasons, and thirdly that good reasoning could be strengthened when students participated actively in the forum of group discussion and decision-making.

Although the instructor was successfully able to 'scaffold' the learners to produce an appropriate text-based response to the question regarding King Arthur's relevance and in so doing stressed the importance of supporting answers with sound reasoning, we do not consider the interaction as a DA. In DA the interaction would not have concluded with completion of the task at hand. The instructor's goals of improving the students' ability to draw appropriate inferences when reading a text,

to support these inferences with evidence from the text, and to enhance their argument through interaction with others would have been realized in additional activities designed to discover the extent to which they had indeed appropriated these abilities. Thus, the students' mediated performance would have been a springboard for exploring the extent to which they were able to reduce the distance between their present and their future. As things stand, the instructor simply highlighted the importance of proper inferencing and joint discussion in constructing a reasoned, text-based argument. In essence, the scaffolding provided by the instructor was focused on the task, with at best a reminder to the students that it was important to continue to use the strategies that were in fact scaffolded.

a Scaffolding and the ZPD: Although the concept of scaffolding as originally proposed by Wood *et al.* (1976) was indirectly, at least, based on the ZPD, not all SCT researchers agree that the perceived link between these two notions is appropriate. Chaiklin (2003: 59), while not proposing that we abandon the idea of scaffolding (usually understood as assisted performance) as potentially useful for teaching specific subject matter skills, argues that scaffolding is not generally linked to a specific developmental theory, as is the case for the ZPD. The absence of a developmental perspective in the scaffolding concept is also forcefully noted by Valsiner and van der Veer (1993), who contend that in the scaffolding metaphor, 'the tutor does not "work at" creating any new functions in the "depth" of the child's mind' but instead provides whatever support is needed to sustain the child in the completion of a particular task (1993: 50). Crucially, unlike in the ZPD, scaffolding is not sensitive to those abilities that are in the process of maturing, rather it merely serves as a way for the tutor (or other individuals) to compensate for any ability required to carry out a task that the individual (or group) lacks. Thus, if the action sequence X–Y–Z is required to accomplish a task and if Y is missing, a scaffold is constructed to help the individual (or group) perform Y (Valsiner and van der Veer, 1993: 50). Indeed, citing Bruner (1985: 24), these authors note that a scaffold 'serves the learner as a vicarious form of consciousness *until such time as the learner is able* to master his own action through his own consciousness and control'. Seen in this way, a scaffold is an accoutrement to a task rather than an attempt to impact on the abilities that are ripening. Said

another way, scaffolding does not necessarily situate instruction ahead of development – the cornerstone of Vygotsky’s thinking on development in the ZPD (Valsiner and van der Veer, 1993: 51–52). Newman *et al.* (1989) argue that the scaffolding ‘implies a unilateral action supporting a preplanned architecture’, while the ZPD assumes a social division of labour between the tutor and the learner in which the responsibility for carrying out various aspects of a whole task are distributed between the two but in a socially negotiated way (1989: 153). This means that in ZPD activity who is responsible for what is constantly in flux as the activity itself unfolds. To provide scaffolded assistance to a learner or group may promote completion of a particular task, but it does not necessarily promote development – conscious awareness and control of a particular ability. Therefore, FA, which incorporates scaffolded assistance, is not the same thing as opening a ZPD. For this reason we argue for the relevance of a DA approach to classroom assessment.



VIII Conclusion

In this paper we demonstrated the relevance of DA for the L2 classroom setting. We argued that DA is not just a special type of FA. It is a pedagogical approach grounded in a specific theory of mind and mental development. FA, on the other hand, is not framed by a developmental theory, but instead is based on teachers’ intuitive classroom practice. As such, DA and FA can be differentiated in at least three ways. First, while DA can be carried out formally or informally, it must, by definition, be systematic. It should be remembered that the defining characteristic of DA is the negotiation of mediation aimed at development; in DA, mediation cannot be offered in a haphazard, hit-or-miss fashion but must be tuned to those abilities that are maturing, and as they mature further as a consequence of mediation, the mediation itself must be continually renegotiated. This is what it means to engage in the activity that is the ZPD. As we have seen in our brief analysis of data drawn from FA literature, teachers often fail to interact with students in a way that systematically promotes development. Even when FA is more systematic, as illustrated in Leung and Mohan’s study, it is generally aimed at supporting learner performance (i.e., scaffolding) during a specific task rather than at long-term development. This then is the second difference between DA and FA. To be sure, development may emerge from FA, but it is more or less

achieved incidentally rather than intentionally. The third difference concerns the contexts in which the procedures are used. FA is generally limited to the classroom setting, and indeed is often contrasted with summative assessment. Feedback and assistance provided during summative assessments is assumed to compromise the reliability and validity of any interpretation of test scores. DA, on the other hand, insists upon the inseparability of assessment and instruction because, from this perspective, they form a unity necessary for learner development. Thus, when one shifts the focus of assessment from measuring task performance to understanding and promoting the abilities underlying the performance, interaction during the administration of an assessment are not a cause for concern but rather an indispensable component of the procedure. Indeed, as we have argued in Lantolf and Poehner (2004), DA can be implemented in formal assessment practices, whether these are achievement, proficiency, or aptitude tests. The principle underlying DA is that a full picture of what an individual or group is capable of does not emerge unless and until the ability is not only observed in independent performance but is also pushed forward through specific forms of intervention and/or social interaction between learners and assessors. Thus, DA represents a perspective on assessment and instruction in which these are seen as two sides of the same coin. In other words, true assessment is not possible unless it entails instruction and vice-versa.

The arguments and analyses we have presented in this paper and in our previous project are only the beginning of what we hope will become a significant L2 research and pedagogical agenda. It is important to carry out a great deal more research on DA in both the classroom and more traditional testing frameworks in order to fully understand the impact that this approach to assessment/teaching has on L2 development.

Notes

- ¹ Vygotsky also saw play as yet a third way of conceptualizing the ZPD (see Vygotsky, 1978; Newman and Holzman, 1993).
- ² Sternberg and Grigorenko (2002) make a similar distinction between 'dynamic testing' and 'dynamic assessment', with the former having features of our *interventionist* model and the latter paralleling our *interactionist* approach. We eschew their terminology, however, because we feel our terms more clearly capture the nature of the difference between the two versions of DA.
- ³ From Vygotsky's perspective, the way in which the child interprets what he or she is seeing when alone as in the TV example is very much mediated by what has been internalized from previous mediated interactions with others. This is because for Vygotsky,

history is a critical feature of development and for this reason we must consider that activity is always and everywhere mediated, even when we are ostensibly alone.

⁴ Additional examples may be found in Kozulin and Garb (2002), Antón (2003) and in Lantolf and Poehner (2004).

⁵ In a small-scale study based on Aljaafreh and Lantolf (1994), Nassaji and Swain (2000) report that negotiated mediation is more effective than mediation that is randomly and arbitrarily offered to a learner without any sensitivity to the ZPD.

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