

## **CLASSROOM INTERACTION AND THE DEVELOPMENT OF EMPOWERMENT**

## **INTERAÇÃO EM SALA DE AULA E DESENVOLVIMENTO DE CAPACITAÇÃO HUMANA**

## **INTERACCIÓN EN EL AULA DE FORMACIÓN Y DESARROLLO HUMANO**

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**ABSTRACT:** What is the practical pedagogic value of the zone of proximal development? How might we draw from the writings of Vygotsky and Leontiev with regard to understanding the process of children and young people's development as socialized intellectual beings? This article applies cultural-historical theory to classroom activity in order to reveal the potential for dynamic change in subjectivity, agency, cooperation and collaboration. After a detailed theoretical contextualization which links primary sources and the cultural-historical tradition to learning and development through classroom activity, an incident in a lesson is discussed and situated in its wider narrative of practical experimentation, diagnosis and implementation.

**KEYWORDS:** Activity in the classroom. Subjectivity. Cultural-historical theory.

**RESUMO:** Qual é o valor pedagógico prático da Zona de Desenvolvimento Proximal? Como nós podemos desenhar, a partir dos escritos de Vygotsky e Leontiev, com a intenção de entender o processo de desenvolvimento de crianças e jovens como seres humanos intelectuais socializados? Este artigo apresenta a teoria histórico-cultural em atividades de sala de aula, com intenção de revelar o seu potencial nas dinâmicas transformações na subjetividade humana, posicionamento, cooperação e colaboração. Após detalhada contextualização teórica que relaciona fontes primárias e a tradição histórico-cultural voltada à aprendizagem e ao desenvolvimento através de atividades em sala de aula, discute-se uma situação em aula a qual é tomada em sua narrativa mais ampla de experimentação prática, diagnóstico e implementação.

**PALAVRAS CHAVE:** Atividade em sala de aula. Subjetividade. Teoria histórico-cultural.

**RESUMEN:** Cuál es la utilidad práctica pedagógica de la zona de desarrollo proximal? ¿Cómo podemos extraer de los escritos de Vygotsky y Leontiev, con la intención de entender el proceso de desarrollo de los niños y jóvenes como seres humanos socializados intelectuales? En este artículo se presenta la teoría histórico-cultural en las actividades del aula, con la intención de revelar su potencial en los cambios dinámicos en la subjetividad humana, el posicionamiento, la cooperación y la colaboración. Después contexto teórico detallado que relaciona las fuentes primarias y tradición histórica y cultural centran el

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aprendizaje y el desarrollo através de actividades en el aula, se discute una situación en la clase que se toma en su mayor narrativa de experimentación práctica, el diagnóstico y la aplicación.

PALABRAS CLAVE: Actividad en el aula. Subjetividad. Teoría histórico-cultural.

## INTRODUCTION

The study of rudimentary functions must be the point of departure for evolving a historical perspective in psychological experiments. It is here that the past and the present are fused and the present is seen in the light of history. Here we find ourselves simultaneously on two planes: that which is and that which was (VYGOTSKY, 1978, 64).

The purpose of this article is to build up the theoretical resources we will need to be able to deconstruct an incident in a secondary school classroom and some of the immediate history of activity that leads up to it. I will draw on understandings from cultural-historical theory with particular attention to the foundational work of L. S. Vygotsky and A. N. Leontiev. The importance of disassembling practice with the tool of theory is to explain and demonstrate how some concepts that are frequently invoked in cultural-historical activity theory (CHAT) may be understood in practical terms. I will also introduce terms in order to address some complexities of classroom activity as teaching and learning.

Throughout this article I will draw on my experience as a former secondary school teacher, who has worked for twenty-five years as a teacher educator, university academic and researcher of classroom interaction and culture. I qualified as a teacher of English in 1981 and have worked in classrooms ever since. I understand what it means and what it requires to work in challenging circumstances, and I have helped many teachers to work successfully in such situations. This article is the product of that experience.

From tool to process: significance and limitation of the zone and proximal development

The zone of proximal development furnishes psychologists and educators with a tool through which the internal course of development can be understood (VYGOTSKY, 1978, 87).

At a later point in this article I will to discuss the relationship between learning and development taking place in a conversation excerpted from an audio recording of one of the secondary school lessons I have been involved in recently. This academic year I am spending one day every week working alongside teachers in a local secondary school: my article draws directly on that fieldwork. However, in order to explore the significance of this small piece of

classroom life in terms of its theoretical relevance I will first make an appraisal of Vygotsky's zone of proximal development (ZPD). So that the writing that has influenced my thinking is accessible, I will draw extensively from a range of authors' texts by use of direct quotation rather than simply cite publications.

The ZPD is not straightforward to understand, so I will attempt to unravel some of its complexity. My purpose is to reach a depth of understanding that we might then apply to the situation I have transcribed. We need to avoid if possible the trap of research that purports to lead pedagogy by appropriating a powerful theoretical construct and attributing to it a property of learning as if by magic – that is, without being able to explain its educative process:

Theoretical knowledge of how children develop continues to grow but just how to relate this knowledge to the practical contexts in which adults intentionally and systematically intervene to foster this development, in a word, to educate, remains almost as mysterious as when such efforts first began (OLSON; BRUNER, 1996, p. 9).

In 'Interaction between Learning and Development', Vygotsky famously introduces the concept of the zone of proximal development (ZPD) in contrast to the actual developmental level that 'characterizes mental development retrospectively, while the zone of proximal development characterizes mental development prospectively' (1978, p. 86-87). In its longer version, this quotation finds its way into many textbook discussions of pedagogy and teacher education. Removed from Vygotsky's wider argument, the ZPD itself becomes definitive and yet elliptical: learning and development seem to become abstract creations of the ZPD.

There are many difficulties with over-simplified, generalized, abstracted and idealized versions of the ZPD. Daniels offers a valuable overview of the scope of definition of the ZPD by scholars working in the cultural-historical tradition, particularly in relation to its purpose with respect to social development:

It remains the case that most of Vygotsky's writing tends to focus on the more immediate interactional/interpersonal antecedents of independent or seemingly independent functioning. The first important implication of this for pedagogy is that teaching and assessment should be focused on the potential of the learner, rather than on a demonstrated level of achievement or understanding. The second is that teaching, or instruction, should create the possibilities for development, through the kind of active participation that characterises collaboration, that it should be socially negotiated and that it should entail transfer of control to the learner (DANIELS, 2001, 61).

In order to specify and focus the application of the ZPD some researchers have argued for other zones and terminology (VALSINER, 1997; MERCER, 2001). Hedegaard, in

one of the earliest and best reviews of the ZPD, proposes the practice of a ‘teaching experiment’ (1990, p. 183). Chaiklin calls the generalized notion of the ZPD an ‘ideal type’ and starts his deconstruction of these difficulties with a review of the ‘common interpretation’ as a series of three assumptions:

generality assumption<sup>1</sup> (i.e., applicable to learning all kinds of subject matter), assistance assumption (learning is dependent on interventions by a more competent other), and potential assumption (property of the learner that permits the best and easiest learning) (CHAIKLIN, 2003, 41).

Each assumption is a misappropriation of Vygotsky’s argument and purpose, as Chaiklin goes on to demonstrate. He concludes that:

It seems more appropriate to use the term zone of proximal development to refer to the phenomenon that Vygotsky was writing about and find other terms (e.g., assisted instruction, scaffolding) to refer to practices such as teaching a specific subject matter concept, skill, and so forth (CHAIKLIN, 2003, 59).

The ‘phenomenon Vygotsky was writing about’ is the socio-historical construction of psychological development of the child. In the phrase “zone of proximal development”, “Development” is the subject noun and the object of the activity that the ZPD describes, not instruction or learning.

Cole (1985, p. 155) places the ZPD in terms of experimental research activity:

When Vygotsky and his students observed the actual processes by which children came to adopt the role of adults in culturally organized activities, they emphasized [...] the interactional nature of the changes we call development. They found it useful to characterize the behavioral changes they observed in terms of shifts in control or responsibility. In 1934 (translated in 1978) Vygotsky coined the term “zone of proximal development” to describe this shifting control within activities. He first applied the idea in the context of instruction and testing.

The ZPD in this context of practice is for diagnostic purposes – Vygotsky is trying to stimulate and reveal evidence of psychological development of consciousness through learning, not as an ideal abstract but as habits formed from object-driven practical activity:

Learning is more than the acquisition of the ability to think; it is the acquisition of many specialized abilities for thinking about a variety of things. Learning does not alter our overall ability to focus attention but rather develops various abilities to focus attention on a variety of things. According to this view, special training affects overall development only when its elements, material, and processes are similar across specific domains; habit governs us. This leads to the conclusion that because each activity depends on the material

with which it operates, the development of consciousness is the development of a set of particular, independent capabilities or of a set of particular habits (VYGOTSKY, 1978, p. 83).

When we work back through the available literature to discover original conceptions for the ZPD then certain qualities emerge that lead us to purposeful and practice-based understandings of its role and potential in explaining learning and development. It is Cole (1985, p. 152) who argues the ZPD in terms of activity: ‘Leontiev concept of activity provides the basic unit of analysis that Vygotsky and his colleagues had been using in a partially articulated way in their research’. So, in Cole’s reasoning, the ZPD has the potential to move beyond its experimental stimulative capacity into a more generalizable and activity-based situation:

I would like to treat the idea of a zone of proximal development in terms of its general conception as the structure of joint activity in any context where there are participants who exercise differential responsibility by virtue of differential expertise. (COLE, 1985, 155)

What is important here is that Cole is referring to the ZPD’s structuring capacity in terms of activity – how the ZPD is a ‘structure of joint activity’. This is a very different idea than the suggestion that all joint activity denotes a ZPD or that all joint activity necessarily brings about psychological development or constitutes learning. For Cole, the deciding factor is the predicate of the above statement – the ‘context where there are participants who exercise differential responsibility by virtue of differential expertise’.

In ‘Interaction between Learning and Development’ (1978), Vygotsky’s objective is not the ZPD per se, but the scientific psychologically-driven explanation of children’s learning processes in terms of social and cultural development over time. What Vygotsky builds from his critique of different conceptions of learning and development and from insights gained from both epistemological review and empirical research, including those experiments and observations carried out by his own research group, is a body of evidence that can:

illustrate a general developmental law for the higher mental functions that we feel can be applied in its entirety to children’s learning processes. We propose that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. Once these processes are internalized, they become part of the child’s independent developmental achievement.

From this point of view, learning is not development; however, properly organized learning results in mental development and sets in motion a variety of developmental processes that would be impossible apart from

learning. Thus, learning is a necessary and universal aspect of the process of developing culturally organized, specifically human, psychological functions (VYGOTSKY, 1978, p. 90).

In this formulation, therefore, we should attend to what is distinctive about ‘properly organized learning’ and the significance of ‘developmental processes’ that are awakened in the instance of interaction with ‘people in his environment and in cooperation with his peers’. There is nothing in Vygotsky’s formulation here that suggests that internalization is immediate, or that development is mobilized instantaneously.

In fact, when we detach a child’s development from learning as an immediately internalized outcome, as if it were a reaction to a stimulus, then we require our perspective to recognise and realise development long-term through that very process Vygotsky calls mediation. By long term I do not mean simply a person’s chronological development over time but also our historical development within and across events. We engage in all sorts of cooperative interactions, object-focused and objectifying events in (and of course beyond) a school lesson in a day. Equally and dialectically, such externalized events co-construct us and become subject-focused and internalizing events. This is the culture- and person-making power and potential of mediation and its means:

human action typically employs ‘mediational means’ such as tools and language, and [...] these mediational means shape the action in essential ways (WERTSCH, 1991, p. 12).

These powerful and constitutive acts and events for self and society propose how learning is always enacted by and within a process of ‘transition to higher mental functions by way of their mediation and construction of a sign operation’ (VYGOTSKY, 1999, p. 46). Furthermore, it is the activity of engaging in and with mediation and its means that determines agency:

[M]ediational means played such a central role in a Vygotskian approach that it is appropriate to understand agency (i.e., who it is that carries out action) as mediated agency, or “individual(s)-operating-with-mediational-means.” (WERTSCH; RUPERT, 1993, p. 230)

The gain of language for oneself and with others is utterly revolutionary and enduring in terms of our new capacity for agency and for making connections with and within what becomes our construction of the world:

The child who talks as he solves a practical problem connected with the use of tools and unites speech and action into one structure adds a social element to his action in this way and determines the fate of this action and the future

path of development of his behavior. In this way, the behavior of the child is first carried to a completely new plane, it begins to be guided by new factors and results in the appearance of social structures in his mental life. His behavior is socialized. This is the main determining factor in all further development of his practical intellect. A situation in which people begin to act as well as things, acquires for him social significance as a whole. For him, the situation is like a problem set up by the experimenter, and the child feels that a person stands behind it the whole time regardless of whether that person participates directly or not. The child's own activity acquires its own meaning in the system of social behavior and, being directed toward a certain goal, is refracted through the prism of the social forms of his thinking.

The whole history of the child's mental development teaches us that from the first days, his adaptation to the environment is achieved by social means through the people around him. The path from the thing to the child and from the child to the thing lies through another person. The transition from the biological to the social path of development is the central link in the process of development, a cardinal turning point in the history of the child's behavior. The path through another person is the central track of development of practical intellect, as our experiments demonstrated. We are speaking here of a paramount role (VYGOTSKY, 1999, p. 20).

In this way, any notion of a ZPD as structuring learning within the process of mediation has to recognise that learning, whether for child or adolescent or adult, from the onset of engagement with the world through discourse, is always going to be 'refracted through the prism of the social forms of his thinking'. The social forms of thinking support us thinking about them more widely, more socially, more self-determinately than instruction in scientific principles and concepts. The personal possessive – the 'his' of thinking that could equally be 'her' – constitutes a particular subject who is doing that thinking.

When we integrate the aspects of Vygotsky's writing presented so far with aspects of Leontiev's foundational essay, 'The Problem of Activity in Psychology' (1981), which establishes activity as the unit of analysis in human psychological development, there is further scope we can add to the mode of teaching and learning that activates sociopersonal development. We are now moving beyond the purview of the ZPD in Vygotsky's formulation, but still within the practices of mediation.

Just as Vygotsky does in 'Interaction between Learning and Development' (1978), Leontiev (1981, p. 41) critiques biological and metaphysical versions of mental development and corresponding explanations of the activity of mind:

According to it, activity is interpreted in either an idealist framework or a natural- science, materialist framework as a response of a passive subject to an external influence, in which the response is guided by innate organization and learning.

What is important in this statement from a pedagogical perspective is Leontiev's conception of activity 'as a response of a passive subject to an external influence, in which the response is guided by innate organization and learning'—this, of course, is precisely how much didactic teaching and learning is framed. In practice, and this has always been a key problem in my observation of lessons, learners spend a great deal of time in the role of passive subjects, often as spectators listening to, watching, reading, copying operations that are transmitted by a teacher. Learners are expected to guide themselves, organize themselves and learn from these episodes, supposedly in an innate process of knowledge-exchange. There is unlikely to be any recognition of or direct engagement with the social forms of thinking in the reductionism of passive learning.

Although we can argue that activity is activity, whether passive or active, there is a different and distinct dynamism to Leontiev's formulation of 'practical contact' that is driven by an individual motivated by personal and collective social gain:

Activity necessarily brings the human into practical contact with objects that deflect, change, and enrich this activity. In other words, it is precisely in external activity that the circle of internal mental processes is broken. It is as if the so-called objective world imperiously penetrated this circle. Thus, activity becomes an object for psychology not as a special "part" or "element," but as a fundamental, inherent function. It is the function of placing the subject in objective reality and transforming this into a subjective form. (LEONTIEV, 1981, p. 52-53)

What is important in Leontiev argument for our purpose with regard to advancing pedagogy is that he has been discussing the role of emotions and feelings as object-oriented expressions (objectifying) and impressions (subjectifying) of motive and desire in relation to human activity through labour:

In connection with the analysis of activity, it is sufficient to point out that its objective produces not only the objective character of images but also object-orientation of desires and emotions (LEONTIEV, 1981, p. 50)

Therefore, live, practical activity with mediational means gives real – as opposed to ideal – value to pedagogy. This proper agency engages actively those who are acting collectively and the means by which these actions are objectified. This agency functions to transform through mediation the activity in objective reality into subjective form. Motives, including desires, feelings and emotions are constructed subjectively with real world objectification through activity:

There can be no activity without a motive. “Unmotivated” activity is not activity devoid of a motive: it is activity with a motive that is subjectively and objectively concealed. (LEONTIEV, 1981, p. 59)

Agency is not a term that Vygotsky or Leontiev employs, although we can begin to recognize from their explanations of cultural-historical development of mind through activity that different motivations for an individual within social activity offer different powers of agency. We can also recognize that agency in terms of pedagogy simultaneously and inextricably involves both intellectual and emotional self-construction within the same subjective world<sup>ii</sup>. This has important ramifications for what we might pay attention to in terms of learning and development within and outside of formal situations of schooling.

Activity is not a monolithic permanent structure in Leont’ev’s argument; activity has the capacity to shift, transform, die away and be reborn, according to changes in its motivation:

An activity can lose the motive that inspired it, whereupon it is converted into an action that may have a quite different relation to the world, i.e., implement a different activity. Conversely, an action can acquire an independent, energizing force and become an activity in its own right (LEONT’EV, 1981, p. 65).

The metamorphosis of activity occurs with changes in the object-motives of its agents. This too is an important point for our understanding of agency in classroom activities, since a learner or group of learners can construct a different activity around a different motive and thereby engage effectively in different objective and subjective realities than those pursued by other members of the class or the teacher. Of course, the teacher too can lose purchase on the original object-motive (lesson or task objective), lose sight of the goal of an action, or be lured off-plan into the alternative activities that other agents are developing within the space and play of the original lesson. Classroom activity abounds with struggles over mediated agency<sup>iii</sup>. This is not the occasion on which to discuss the relationship between motive and volition; however, suffice it to say that learners who will not (an act of volition) fit into a passive or a required agency within a learning activity will exploit other motivations, usually interpersonal, to create contact and conversation that can easily stretch across a room of thirty people, often to the detriment of the intended collective activity. Intended objects like the production of personal and collective labour in terms of completed and coherent work can and do fragment and disintegrate rapidly when powers of agency become contested rather than collaborative.

A recent formulation of the balance of power in the ZDP engaged by children in groupwork attributes learning and development to peers, teachers and the power of collective discourse. Here multiple agents work symmetrically to establish and maintain an agency that

is shared and energetic with multiple opportunities for personal and collective activity and expression:

Our analysis shows that far from exhibiting an asymmetry, the zone of proximal development is an interactional achievement that allows all participants to become teachers and learners (ROTH; RADFORD, 2010, p. 303).

The advantage of the symmetric approach to the zone of proximal development that we propose here is that it allows the question of the more capable subjectivity to emerge from the interaction, appropriate especially when the question who is in the know cannot be established on the basis of the institutional positions that the individuals otherwise take (ROTH; RADFORD, 2010, p. 304)

Agency, in its liberating revolutionary form of subjectivity, does not rest in the roles of teacher and learner becoming ossified in maturational differences (a biological misconception of agency) or in institutional ranks (a material-ideological misconception), but in the potential play of agency – the habitation and exercise of agency as a person-who-teaches and a person-who-learns. This, I believe, is to reinvest teaching and learning with some of the potential agency that Vygotsky explains in relation to the play of pre-schoolers. Of course, school is the institution in which young people engage more and more closely with the demands of adult life and the world beyond school, but surely this obviates a need to realize school as a liminal space that is not quite yet adult life, just its threshold:

This strict subordination to rules is quite impossible in life, but in play it does become possible: thus, play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all developmental tendencies in a condensed form and is itself a major source of development.

Though the play-development relationship can be compared to the instruction-development relationship, play provides a much wider background for changes in needs and consciousness. Action in the imaginative sphere, in an imaginary situation, the creation of voluntary intentions, and the formation of real-life plans and volitional motives – all appear in play and make it the highest level of preschool development. The child moves forward essentially through play activity. Only in this sense can play be considered a leading activity that determines the child's development (VYGOTSKY, 1978, p. 102-103).

Pedagogy turns on the understanding we have of learners as subjects of learning – that is, people seeking (to recycle some of Leontiev's words above) a direct relation with the practical world of knowledge-making and doing which brings a feeling and sense of independence and energization. To engage with a learner symmetrically as a rational subject

who thinks, speaks and acts with an internalized sense of culture warrants pedagogical practices that are radically different from filling empty heads with knowledge or instructing human animals to perform skills:

The child is seen as possessing beliefs and theories that are formed and revised on the basis of evidence; pedagogy is a matter of assisting them in evaluating their beliefs and theories reflectively, collaboratively, and finally, archivally. The product is not just the preservation of the past, but more importantly, the beliefs and theories acquired will be those held for good reasons (OLSON AND BRUNER, 1996, p. 23).

Pedagogy at work and in play with a rational subject, furthermore:

implies a conception of learners that may in time be adopted by them as the appropriate way of thinking about themselves, their learning, indeed, their ability to learn. The choice of pedagogy inevitably communicates a conception of the learner. Pedagogy is never innocent. [...] This, presumably, is the way children come to think of themselves as skilled and knowledgeable on the one hand or as untalented and ignorant on the other (OLSON & BRUNER, 1996, p. 23-25).

Such a personally, culturally, historically and ideologically sensitive conception of pedagogy and development over many periods of time is equivalent to what social historians term the *longue durée* (LE ROY-LADURIE, 1972). We need to see the ZPD as affecting and effecting development through learning in terms of the actual structuration of an event and through a historical process lasting in the long term as a narrative of events, and:

extending research to encompass the entire life span. It seems desirable, therefore, to enlarge Vygotsky's framework by replacing "child history" with "life history" (SCRIBNER, 1985, p. 40).

Since what we learn is indivisible from how we experience that learning, the meaning we make of any situated event and sequence of events happens within a longer autobiographical story of events. In the first instance we tell our story of our experience of development in and outside of school to ourselves – we are our primary audience. In some circumstances, we tell some of that story to others, and this is the story of how and what and sometimes why we think about ourselves and how we have come to do this thinking. Life, as Bruner has written, may be related as narrative:

I believe that the ways of telling and the ways of conceptualizing that go with them become so habitual that they finally become recipes for structuring experience itself, for laying down routes into memory, for not only guiding the life narrative up to the present but directing it into the future. I have argued

that a life as led is inseparable from a life as told—or more bluntly, a life is not “how it was” but how it is interpreted and reinterpreted, told and retold (BRUNER, 2004, p. 708).

Mariane Hedegaard’s conception of the development and learning of children and young people has, over time, put aside the significance of the ZPD as a tool in order to concentrate on the reciprocal process of development:

The change in view from the child as a recipient in learning situations to the child as a participant in learning, and the change in view from learning as a cognitive process to an activity leads to new forms of teaching practice. Each child becomes involved in a reciprocal process in which his/her motives and personality plays a part in the interaction with the other persons in the classroom – the teacher and their classmates.

In the third period, the late childhood period, the secondary school age and youth period, the child’s motive development is directed towards engagement in other persons and society. The dominating motive is togetherness with classmates, to be socially accepted and at the same time an orientation towards self worth. The child’s/youth’s cognitive development can be characterized by mastering of methods for reflection about personal relations, work and societal relations (HEDEGAARD, 2004, p. 30).

Attention to the changing pattern of reciprocal process from teacher-orientation to peer-orientation recognizes the increasingly self-conscious and interpersonal sense of socialization and otherness that emerges in the later ‘turning points of development’ (VYGOTSKY, 1998, p. 93), especially that turning point when a child shifts from primary to secondary school and at the onset of adolescence.

In ‘The Problem of Age’, Vygotsky (1998) focuses intently on the crises, turning points and negativity children and young people experience in the course of growing up and developing as social beings. Here Vygotsky works towards an application of the ZPD as part of a diagnostic method capable of uncovering the history of children’s development, just as he does in ‘Interaction between Learning and Development’ (1978) and ‘Tool and Sign in the Development of the Child’ (1999), although with different emphasis each time:

At turning points of development, the child becomes relatively difficult due to the fact that the change in the pedagogical system applied to the child does not keep up with the rapid changes in his personality. Pedagogy during the critical ages is least developed in practical and theoretical respects (VYGOTSKY, 1998, p. 93-94).

Much more geared in argument to learning and schooling, the ZPD in ‘The Problem of Age’ measures the potential age the child can rise to through cooperation by introducing experimental problems:

In brief, we ask the child to solve problems that are beyond the limits of his mental age with some kind of cooperation and determine how far the potential for intellectual cooperation can be stretched for the given child and how far it goes beyond his mental age (VYGOTSKY, 1998, p. 202).

What is striking is not the quantitative potentiality of development Vygotsky reaches, so not the product of the ZPD as an instrument, but the process of ‘double stimulation’ that the adult researcher engages the child in:

Using the methods of double stimulation, we can present tasks to the subject pertaining to disparate phases of development and elicit in him, in a condensed form, those processes of mastering the tasks that make it possible to trace the sequential stages of mental development during the experiment (VYGOTSKY, 1999, p. 60).

By reading across his writings that introduce the ZPD within the different arguments concerning development and learning that Vygotsky makes, we realize that Vygotsky’s diagnostic process is what reveals to us the present and the past of children and young people’s development of personality and behavior. In principle, some aspects of the diagnostic work that sets up problem situations as double stimulation are also useful as teaching methods. This is what we might infer from the promise in ‘The Problem of Age’ to suggest teaching principles in a later chapter of a book on child development Vygotsky did not live to complete:

The practical significance of this diagnostic principle is connected with the problem of teaching. A detailed explanation of this problem will be given in one of the closing chapters (VYGOTSKY, 1998, p. 203).

In effect, my argument is derived from Hedegaard’s long-standing principle that ‘teaching should create zones of proximal development through involving children in new kinds of activity’ (1990, p. 180) through forms of teaching experiments. In particular, I am suggesting that teachers can observe aspects of young people’s developmental process as they emerge by setting learners a problem of interpersonal dimensions, that is, a problem of cooperation that requires the construction and maintenance of a social situation, for instance, stipulating a way of working with each other in a classroom. There may, of course, be an intellectual, subject-based process also to be learned, which would be a more traditional application of the ZPD as a tool for the development of higher mental functions. However, in the instance I am going to discuss, at issue is the learning of cooperation. What we need to bear witness to carefully and sensitively is the evidence of subjective problems that arises for some learners when placed in such a situation.

What will be important is not the nature of the activity as a tool or a type, in the sense that one might habitually use exploratory group work, or teacher-led feedback, or any of a range of methods for organizing teaching and learning, but the activity as an experimental and diagnostic process, in terms of its power to reveal negativity through tensions and crises for some learners whilst revealing how other learners appropriate the same situation and engage effectively. The developmental potential for pedagogy lies in the way we bear witness in an act of symmetry to what happens and assist a ‘more capable subjectivity to emerge’ (ROTH; RADFORD, 2010, p. 304).

The quotation from Vygotsky that opens this article alludes to how his experimental method aims to reveal how the ‘present is seen in the light of history’. What the ZPD offers learning is the potential for development on a third plane, moving from ‘that which is and that which was’ to that which might be (VYGOTSKY, 1978, p. 64). It is towards the instigation of that potential that we will now turn.

#### An example of an incident with potential significance for development

In summary, children confronted with a problem that is slightly too complicated for them exhibit a complex variety of responses including direct attempts at attaining the goal, the use of tools, speech directed toward the person conducting the experiment or speech that simply accompanies the action, and direct, verbal appeals to the object of attention itself (VYGOTSKY, 1978, p. 30).

The incident that follows provides qualitative data that I wish to explore through cultural-historical interpretation. I am, therefore, adopting a constructionist and hermeneutic stance towards a re-presentation of a social reality to be found in the activity of schooling (CROTTY, 1998; LEONTIEV, 1981, VYGOTSKY, 1978). To put this in less abstract language, I am going to give my understanding of what is significant in terms of human social development by making reference to evidence I will draw from a recording of an experience in a classroom in which I am involved and which I attempt to make available and actual to you through transcription. I am giving you a partial and personal version of an event in a much larger history to which I have limited access.

The transcript presents a discussion between some pupils and two teachers at approximately 12:20, right at the end of a 60-minute English lesson for a Year 8 (12-13-year-olds) class in a secondary comprehensive school in Bristol—a city in the west of England. English as a subject covers learning about our national language and literature and teachers follow a prescribed national curriculum<sup>iv</sup>. A comprehensive school is a state school that accepts by law

without selection<sup>v</sup> girls and boys of all physical and psychological abilities in its geographical locality who apply to join the school at the age of 11 and leave either at 16 or continue until the age of 18. In a year group pupils are often placed in a class based on their ability in the subject with class 1 the highest ability and class 4 the lowest. Youngsters at this particular school attend five lessons between 8:40 and 15:10 with a mid-morning break of 20 minutes and a lunch break of 45 minutes. The school is typical of many in England situated in predominantly working-class communities with about 15% of learners from ethnic minority families or with one parent from an ethnic minority.

Preceding the incident reported, the class has been asked to work on a piece of writing in silence on their own for fifteen minutes without questions. There are very clear instructions in simple language displayed on the interactive whiteboard and the pupils have already completed some of the task in a previous lesson. Emphasis has been on sorting out problems for oneself. Immediately, some boys have started asking questions and have been rebuffed by the teachers and have then made a loud performance in protest. A few boys have decided that if they can't ask a question then they won't commit to the work. The boys who have maintained a disruptive performance and/or have not completed the work have been kept behind after the class. There are four of them: W, X, Y and Z. This kind of behaviour is typical of approximately 20% of boys and 5% of girls in the classes I have observed. The teachers in the room are T (an experienced female, who leads the lesson) and R (me, the researcher, male, working as a support teacher). The class has two English teachers during the week (the other is referred to as Ms. B in the transcript). W, X and Y have reflected on their behaviour and explained themselves to the satisfaction of T. Z has refused to reflect and has said that he has not done anything wrong so he should not be kept behind. The transcript is written in the language used.

Year 8 English class (ability 2).

T: Well, I think the other three can go then because they've come up with something.  
[Chairs scrape]

## NOTES

<sup>i</sup> Throughout this article words quoted in italics or underlined have been copied from the original source.

<sup>ii</sup> There is currently a rapidly growing literature devoted to the Vygotskian concept of *perezhivanie* (MAHN; JOHN-STEINER, 2002) in an attempt to rebalance the emotional dimension of lived experience. I doubt, going back to Vygotsky and Leontiev as I have done here, whether any schism between intellectual and emotional growth was intended in the first place.

<sup>iii</sup> Elbers, Maier, Hoekstra and Hoogsteder (1992) respond to Wertsch and Stone (1985) with respect to the mediated agency of the child rather than that of adult and thereby reinstate the co-construction of learning through activity.

<sup>iv</sup> National examinations (standardised assessments) are taken at the ages of 7, 11 (before moving to secondary school), 16 and 18. In reality, in secondary school, students are assessed continuously from entry and examined regularly, especially from the age of 14 onwards.

<sup>v</sup> In fact there is much “invisible” selection, sometimes referred to as “selection by postcode”, because different schools serve areas with very different socio-economic standards of living, so a school in a poor area is often compared through exam results with a school in an affluent area. There is also a large private school sector in the UK and children from middle-class families are often sent to a private school instead of to their local comprehensive state school. In England, Scotland and Wales, there are some single-sex state schools, whereas in Northern Ireland many state schools are single-sex.