

# Vygotsky's Notion of the ZPD: Teaching, Assessment and Imagination

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Vygotsky's notion of what is commonly known as the *Zone of Proximal Development* (ZPD) has been influential in providing teachers, educational psychologists, and researchers in second language acquisition (SLA) studies, particularly those working within the domain of sociocultural theory, a framework in which to better understand the relationship between teaching, learning, and the development of higher psychological functions, and to utilise this understanding in providing effective education. Problematically, the ZPD has been variously translated, understood, and utilised causing confusion among those who wish to better understand and apply Vygotsky's original idea to their own teaching and learning situation. The aim of this investigation is to access reliable translations of Vygotsky's works in which the ZPD is discussed in order to ascertain what Vygotsky actually meant by the ZPD and to clarify its original application to teaching, learning, and development. A further and integrated aim is to identify aspects of Vygotsky's thoughts on development and learning that are related and implicitly included in the notion of the ZPD.

Vygotsky's notion of the Зона ближайшего развития (*zona blizhaishego razvitiia* – ZBR) (Valsiner & Van der Veer, 1993, p. 36) appears to have been first translated into English as the “Zone of Proximal Development” (ZPD) with the first English translation of Vygotsky's *Thought and Language* (1962) in which it was stated to be: “The discrepancy between a child's actual mental age and the level he reaches in solving problems with assistance indicates the zone of his proximal development” (p. 103). This has remained the standard translation and common understanding of the ZBR for teachers of English as a Foreign Language (EFL), English for Speakers of Other Languages (ESOL), and researchers into Second Language Acquisition (SLA), no doubt due in part to an often cited collection of translations of Vygotsky's writings, *Mind in Society: The Development of Higher Psychological Processes* (1978a) where the ZBR, being translated as the “Zone of Proximal Development” (ZPD), is defined as: “It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in

collaboration with more capable peers” (1978b, p. 86). This newer translation of the definition of the ZPD is said to be from a collection of Vygotsky’s essays that were originally published posthumously in 1935 in a Russian volume translated as *Mental Development of Children and the Process of Learning* (Cole et al., 1978, p. ix). Unfortunately, the title of Vygotsky’s actual essay from which this translation was made is not given. This is problematic for verification. However, chapter six, “Interaction between Learning and Development,” in *Mind in Society*, from which this newer 1978b translation is found, begins with similar content, structure and translation to that of Vygotsky’s original essay “The Problem of Teaching and Mental Development at School Age” (Vygotsky, 2017). Barrs (2017) confirms this and notes that Vygotsky’s original essay was “substantially edited” (p. 345) in the translation found in *Mind and Society*. In the more faithful 2017 translation the ZPD is defined as “The difference between the level at which it solves a problem under guidance, with the help of adults, and the level at which it acts on its own defines the zone of proximate development” (p. 366), which aligns more closely with the original 1962 translation given in *Thought and Language* than the expanded translation given in *Mind and Society*, which in turn appears to be a translation of that given by Vygotsky in a lecture at the Department of Special Education, Bubnov Pedagogical Institute in 1933 (Kozulin, 2011, p. 196) published as “The Dynamics of the Schoolchild’s Mental Development in Relation to Teaching and Learning” (Vygotsky, 2011, p. 204).

It should be noted here that the translator of the 2017 definition chose *proximate* over *proximal* as a more accurate rendering of ближайшего (*blizhaishego*) (Barrs, 2017, note 3. pp. 356-357). The nuance is subtle, but it indicates a different understanding of the ZPD. More will be discussed on this matter below.

These two definitions of the ZPD from different texts tell us that the ZPD can be identified and determined with some form of measurement, namely with some form of comparison of what the learner can achieve in solving given problems alone and what they can achieve in solving the same problems with assistance given to them by a person with more knowledge and expertise, whether that be a more competent peer or adult. What measure is used in determining the ZPD of any person is not given. Presumably the measure of assessment will be in accord with the academic subject being investigated and the degree and quality of assistance given will be taken into account when ascertaining the boundaries of a person’s ZPD. However, these references to Vygotsky’s account of the ZPD fail to fully capture his notion of the ZPD with respect to play and imagination, of which more will be discussed later.

The point to make here is that these references to Vygotsky’s definition of the ZPD have been the standard in interpreting and understanding the ZPD within EFL, ESOL and SLA teaching and research, no doubt because they give an account of the ZPD that can easily be applied to teaching and

assessment. Problematically, this limited notion of the ZPD has been interpreted and used in different ways. Mercer and Fisher (1992) noted that, “there is a danger that the term is used as little more than a fashionable alternative to Piagetian terminology or the concept of IQ for describing individual differences in attainment or potential” (p. 342). Palincsar (1998) noted that the ZPD, “is perhaps one of the most used and least understood constructs to appear in contemporary educational literature” (p. 370). Dunn and Lantolf (1998, pp. 416-417) identified a number of academics (Richard-Amato, 1983; Kramsch, 1992; Schinke-Llano, 1993; Johnson, 1995; and Guerra, 1996) associating the ZPD with Krashen’s (1981, 1982) notion of *i+1* which prompted them (Dunn & Lantolf, 1998) to demonstrate the fundamental incommensurability of these two concepts. Kinginger (2001) also highlighted the conceptual differences between the notion of *i+1* and the ZPD. Further, Kinginger (2002, pp. 252-256) identified and critiqued three different interpretations of the ZPD: skills, scaffolding, and metalinguistic. Kozulin et al. (2003) stated that the ZPD, “remains rather poorly understood” (p. 3) and Chaiklin (2003) claimed that, “Vygotsky’s concept of [the] zone of proximal development is more precise and elaborated than its common reception or interpretation” (p. 39). Lantolf and Thorne (2006) noted:

There is an industry built upon educational and developmental research that has utilized, co-opted, repurposed, and expanded the ZPD concept. Its broad adoption has caused the proliferation of heterogeneous interpretations of the ZPD: some presume the ZPD to be a heuristic and a metaphor while others suggest the ZPD is a concrete descriptor of developmental trajectories. (p. 263)

Lantolf, in an interview with Verity (2007), noted that even after more than 80 years the ZPD is, “one of the most misunderstood and misused constructs of the entire [sociocultural] theory. To extricate the ZPD from Vygotsky’s writings on development, mediation, activity, sense, sign, et cetera, undermines the construct itself” (p. 128). One source of the various interpretations of Vygotsky’s ZPD appears to stem from Vygotsky’s own writings. Yasnitsky (2018) writes, “Curiously, in Vygotsky’s various texts the ‘zone’ meant several different things depending on where and when it occurred” (p. 115).

The ZPD thus appears to have been (mis)interpreted and utilised in different ways, even by Vygotsky. With such a range of interpretations the purpose of this essay is to investigate Vygotsky’s original works in English translations in order to better understand the original concept of the ZPD and identify the key notions of Vygotsky’s ideas on teaching, learning and development embedded in this concept.

To give an overview of this investigation, the next section discusses an issue regarding the translation of the ZPD and whether “proximal” or “proximate” is more appropriate. Following this, information on the published sources of the ZPD in Vygotsky’s works will be given. Afterwards, the ZPD

and related zones will be explained with reference to Vygotsky's ideas on interpersonal and intrapersonal processes, internalisation, three types of regulation (object, other, and self), dynamic development, linear and non-linear development, spontaneous and scientific concepts, assisted learning, scaffolding, dynamic assessment, how the ZPD is created, and finally the importance of play and the imagination.

### TRANSLATIONS OF THE ZPD: PROXIMAL OR PROXIMATE?

Vygotsky's Зона ближайшего развития (*zona blizhaishego razvitiia* – ZBR) as mentioned above was translated into English as the “Zone of Proximal Development” (ZPD) with the first English translation of Vygotsky's *Thought and Language* (1962). However, ZBR was also translated as “Zone of Potential Development” in a translation of “Learning and Mental Development at School Age” (Vygotsky, 1963) by Simon, who noted later in 1987 that this phrasing had been approved by Luria, a distinguished Soviet/Russian scholar (Van der Veer & Yasnitsky, 2016, pp. 152-153). More recently the translation of ближайшего (*blizhaishego*) as *proximal* has been questioned. In translating “The Problem of Teaching and Mental Development at School Age” (Vygotsky, 2017) the translator, Mitchell, used *proximate*, “Zone of Proximate Development.” Barrs (2017) in footnote 3, noted Mitchell, “considered that ‘proximate’ was a direct translation of the Russian original. Other Russian translators whom I have consulted and who, like him, were not familiar with the 1978 translation, have agreed with him” (pp. 356-357). Translating ближайшего (*blizhaishego*) as *potential* appears broad and innocuous, even if not accurate. However, the nuances of *proximal* and *proximate* need to be investigated more carefully.

*The Oxford Russian Dictionary* (1993) in the Russian-English section gives ближайший [blizháysh|iy] as a superlative of близкий [blizkiy] meaning *nearest, next, or immediate* (p. 26). In the English-Russian section it gives for *proximate* the adjective ближайший [blizháyshiy] (p. 1081), but in this dictionary there is no entry for *proximal*. *John Wiley & Sons' English-Russian, Russian-English Dictionary* (1984, p. 435) and *The Penguin Russian Dictionary* (1996, p. 580) give the same translations for ближайший [blizháyshiy] as *The Oxford Russian Dictionary* (1993) does. *Elsevier's Russian-English Dictionary* (1999) gives virtually the same translations with *nearest, closest, and immediate* (p. 191). Further, the *Russian-English Dictionary* published by Rusky Yazyk (1989) translates Ближайший [Blizháysh|iy] as *nearest* and Ближайшпóвод [Blizháyshpóvod] as *immediate / proximate cause* (p. 51). In *John Wiley & Sons' English-Russian, Russian-English Dictionary* (1984) there are no entries for either *proximal* or *proximate*. *The Penguin Russian Dictionary* (1996), in contrast, does have an entry for *proximate* and gives the translation as ближайший [blizháyshiy], accompanied by the meaning *nearest* (p. 386). This translation is in accord with that given in *The Oxford Russian Dictionary* (1993)

and, further, in both dictionaries, there is no entry for *proximal*. From these dictionary entries it appears that *proximate* is the best translation for ближайшего (*blizhaishego*). However, one dictionary consulted did give a translation for proximal. This was *Russky Yazyk's English-Russian Dictionary* (1988) where the translation for *proximal* gives ближайший к месту прикрепления, проксимальный [blizháyshiy k méstu prikrepléniya, proksimál'nyu] roughly meaning “closest to the attachment site, proximal” (p. 229). Because of this dictionary’s translation of *proximal* being compatible with ближайший [blizháyshiy] it should not therefore be discounted as a suitable word to be used in translating Vygotsky’s Зона ближайшего развития (*zona blizhaishego razvitia*) as the “Zone of Proximal Development,” which it has standardly been translated as.

In order to determine which is the better word to translate ближайшего (*blizhaishego*) an analysis of the meanings of *proximal* and *proximate* were checked and compared from the definitions given in *The Shorter Oxford English Dictionary on Historical Principles* (1973). These were as follows:

**Proximal** a. 1803. [f. L. *proximus* nearest + -AL<sup>1</sup>.] *Anat.* Situated towards the centre of the body, or the point of origin or attachment of a limb, bone, etc.: opp. to DISTAL. Hence **Proximally** *adv.* in a p. position; towards or near the p. end or part.

**Proximate** a. 1597. [– L. *proximatus*, pa. pple. of *proximare* approach, f. *proximus* nearest; see -ATE<sup>2</sup>.] **1.** Next, nearest (in space, serial order, quality, etc.); close. **b.** Coming next or very near in time 1845. **2.** Coming next (before or after) in a chain of causation, agency, reasoning, etc.; immediate: opp. to *remote* or *ultimate* 1661. **3.** Approximate 1796.

From these definitions it can be seen that *proximal* and *proximate* share a common etymology, both being derived from the Latin *proximus* meaning *nearest*. However, the nuances of *closeness* or *nearness* are different. *Proximal* is primarily a word related to anatomy and that which is “Situated towards the centre of the body, or the point of origin or attachment of a limb, bone, etc.” (*Shorter Oxford English Dictionary*, p. 1697). It is, as it were, an *internally directed* nearness, relating two things within a pre-existing body, or to follow the analogy of the point of origin or attachment, it would be like tracing back from the distal parts of the body, such as a muscle, to the internal, proximal point where the muscle is attached to the bone. At the point of proximal connection the contact is located within a body that stretches both further centrally and also extends further outwards towards its pre-existing distal parts. This does not fit with Vygotsky’s notion of the ZPD where the point of development is from the external boundaries of what has already been developed, which are then developed, pushed out, and expanded into a zone or

area, or body of development, that currently does not exist. The word *proximal* does not convey this meaning and therefore should not be used as a suitable translation of ближайшего (*blizhaishego*).

*Proximate* with its given meanings of *next, nearest, close, coming next*, and being *immediate* accords well with Vygotsky's notion of the ZPD and the gradual developmental process of building from the previous body or zone and expanding it into unknown territories. *Proximate* relates to the out-pushing of the external boundaries of development into new developmental zones that had previously not existed. Whereas *proximal* relates inwardly to the nearness of things within a pre-existing body, *proximate* relates outwardly to the next phase of an expanding series.

Having examined the various translations given in different English-Russian and Russian-English dictionaries, together with the definitions given in *The Shorter Oxford Dictionary*, it is concluded that *proximate* is the best translation for ближайшего (*blizhaishego*) and this will be seen to be the case after examining Vygotsky's notion of the ZPD more closely later in this essay.

## **VYGOTSKY'S WRITINGS ON THE ZPD**

The notion of the ZPD appears to have been a late developmental idea for Vygotsky who died on 11<sup>th</sup> June, 1934 (Van der Veer, 2007, p. 25). According to Chaiklin (2003, pp. 43-45) and Van der Veer (2007, p. 78), there are only eight published texts where the ZPD is discussed or mentioned at least once. These texts include five stenographic transcripts of lectures, one manuscript, and two book chapters. These, according to Chaiklin (2003, pp. 44-45), are:

1. 1933. "Play and its Role in the Mental Development of the Child." Stenographic transcript of a lecture at the A. I. Herzen Leningrad Pedagogical Institute.\*
2. March 17, 1933. "The Pedological Analysis of the Pedagogical Process." Stenographic transcript of a lecture at the Epshtein Experimental Defectological Institute, Moscow.
3. May 20, 1933. "Development of Everyday and Scientific Concepts in School Children." [Stenographic transcript of a] Lecture at the Scientific-Methodological Council, Leningrad Pedagogical Institute.
4. December 23, 1933. "Dynamics of Mental Development of School Children in Connection with Teaching." Stenographic transcript of a lecture at the Department of Defectology, Bubnov Pedagogical Institute, Leningrad.\*
5. 1934. "The Problem of Teaching and Development During the School Age." Manuscript.\*
6. 1934. "Teaching and Development During the Preschool Age." Stenographic transcript of a lecture at the All-Russian Conference on

Preschool Education.

7. 1934. "The Problem of Age." Book chapter manuscript.\*
8. 1934. "The Development of Scientific Concepts." Chapter 6 in *Thinking and Speech*.\*

Finding reliable translations of the eight published texts in which Vygotsky mentions or discusses the ZPD is difficult and only five of the eight were found in various English translations. These are highlighted by an asterisk after each of the references given above.

These publications place the notion of the ZPD within the third and final phase (1933-1934) of the evolution of Vygotsky's thought that Minick (1987) has identified. In this phase:

Vygotsky reduced his emphasis on the relationship between specific mental functions in psychological systems. Rather, he began to develop a system of psychological constructs that would facilitate the analysis of psychological processes in connection with the individual's concrete actions and interactions. (p. 18)

From the titles of his lectures and writings it is evident that Vygotsky's notion of the ZPD was related to childhood education and cognitive development. However, with only eight published texts in which the notion of the ZPD is mentioned or discussed "there is not an extensive corpus of material from which Vygotsky's true meaning, or official definition, or interpretation can be found" (Chaiklin, 2003, p. 43). Lantolf and Thorne (2006) wrote, "Most interpreters agree that Vygotsky's ZPD concept was unfinished, underspecified, and that Vygotsky presented contradictory explanations of the ZPD concept at various times" (p. 268).

The notion of the ZPD appears to have been conceived through consideration of assessing and teaching school pupils. That the concept may have been so derived does not mean it is limited to this level of educational development and is applicable to any learning situation where a person is moving from a state of not knowing to a state of knowing. The ZPD is a cognitive conceptual zone that can be applied to all people of all ages.

## **DEFINING THE ZPD AND THE RELATED ZONES**

The ZPD is a conceptual area in which cognitive development occurs. Development can be actualised in two ways, either through collaboration with a more capable person, or through play and imagination. The first is stated in the following definition given by Vygotsky in his lecture at the Department of Special Education, Bubnov Pedagogical Institute in 1933 (Kozulin, 2011, p. 196), published as "The Dynamics of the Schoolchild's Mental Development in Relation to Teaching and Learning" (Vygotsky, 2011):

The ZPD of the child is the distance between the level of his actual development, determined with the help of independently solved tasks,

and the level of possible development, defined with the help of tasks solved by the child under the guidance of adults or in cooperation with more intelligent peers. (p. 204)

The second is stated by Vygotsky in his lecture, “Play and its Role in the Mental Development of the Child,” at the Herzen Pedagogical Institute in Leningrad in 1933 (Veresov & Barrs, 2016, p. 3) where he says, “Play is the source of development and creates the zone of proximal development” (Vygotsky, 2016, p.18). These definitions help in identifying a person’s ZPD and knowing what creates it, but for Vygotsky (1998) the ZPD is essentially the “area of immature, but maturing processes” (p. 202).

The notion of the ZPD may be thought of as forming the middle element of a tripartite construction consisting of a Zone of Actual Development (ZAD), followed by a Zone of Proximate Development (ZPD) and a Zone Outside Development (ZOD). The first level, ZAD, is the level at which a stage, or a series of stages, of learning has been completed and the student can perform tasks up to this level independently of other people’s assistance. This stage is demarcated retrospectively after having ascertained what a person can do independently of others. The second level, ZPD, in contrast, is demarcated prospectively, and is the conceptual zone where the next stages of imagining, learning and development are possible. This stretches from what has already been learnt to the outward boundaries where new learning and imagination are no longer possible. This indicates the outer boundary of the current ZPD, beyond which lies the ZOD, a zone of learning beyond the student’s current state of mental development. Metaphorically we can understand the notions of the ZAD, ZPD, and ZOD in terms of the various states of H<sub>2</sub>O (solid, liquid and gas). The ZAD is like ice which is solid and graspable; the ZPD is like water which we can touch and feel, but which has not yet solidified into learning and development; and the ZOD is like vapour which we just cannot grasp and understand.

John-Steiner and Soubelman (1978) note that a number of salient features of Vygotsky’s cognitive theory are compacted, or telescoped into his notion of the ZPD. They give, from the perspective of teaching, interpersonal-intrapersonal, internalisation, and the role of more experienced learners (p. 131). These will be discussed in addition to other identified features of the ZPD.

## **INTERPERSONAL AND INTRAPERSONAL PROCESSES AND INTERNALISATION**

Vygotsky’s notion of the ZPD rests upon the foundation that learning, whether in collaboration with others, such as any person-to-person, teaching-learning situation or in play with others, or alone using our own imagination, is always situated within a pre-existing social context into which we are born. Thus the relationship between the interpersonal interactions with other people and the intrapersonal process of learning and development within the individual



person is important. As Vygotsky (2017) notes:

every higher psychic function in a child's development makes its appearance twice – first, as a collective, social activity, i.e. as an inter-psychic function; secondly, as an individual activity, as the inner ability of the child to think, as an intra-psychic function. (p. 368).

This internalisation of the interpersonal to the intrapersonal is complex and transformative. Vygotsky and Luria (1994) note:

We are present at what is actually a process of the greatest psychological importance: what was an outward sign operation, i.e. a certain cultural method of self-control from without, is now *transformed into a new intra-psychological layer* and gives birth to a new psychological system, incomparably superior in content, and cultural-psychological in genesis. [Original italics] (p. 155)

To paraphrase what Vygotsky and Luria next mention, the act of internalisation alters the interpersonal input in such a way that it no longer exists in its original form. However, elements of this reconstructed input persist and are operational within the newly formed framework of psychological processes (Vygotsky & Luria, 1994, pp. 155-156).

## **OBJECT- OTHER- AND SELF-REGULATION**

Implicit in the notion of the ZPD and Vygotsky's idea of internalisation is the development where an individual moves away from external object-regulation and other-regulation to internal self-regulation (Vygotsky 1997, p. 104-105). Here Vygotsky frames this in terms of the pointing gesture where a child's pointing is an unsuccessful grasp of an object that is out of reach. The action is thus object-regulated. When another person enters the equation, such as a parent, the dynamics change and the pointing to the object becomes a gesture to that other person (other-regulation) to complete the initially unsuccessful grasping act of an object. When that object is given to the child a connection is made between object-regulation and other-regulation leading to a realisation of self-regulation.

## **DYNAMIC DEVELOPMENT**

Vygotsky sees the ZPD as a dynamic zone that can be considered the garden of cognitive development. Vygotsky (2011) notes the "ZPD defines those functions that are not mature yet, but are currently in the process of maturation, the functions that will mature tomorrow. These functions are not fruits yet, but buds or flowers of development" (p. 204). What is currently developing in the student's ZPD, the buds and flowers, will eventually emerge and become part of the student's ZAD, the fully developed fruit. Subsequently, newer, higher-level psychological processes will start to germinate in the newly evolved ZPD and so the developmental cycle continues.

No doubt the time taken for different intellectual functions to mature

and learning to occur in individuals will differ, some happening almost immediately and others taking days, weeks or longer. For Vygotsky (2011, pp. 204-205), in a similar way that a gardener can foresee the stages of a plant's development before harvesting the fruit, and presumably tends to the plants as necessary in order to maximise the crop, so the teacher by understanding a student's ZPD can more fully understand the learning and development taking place, give the necessary instruction and predict the outcome of the student's progress. Development necessitates change and the notion of the ZPD takes account of the fundamental dynamics and the processes that are a necessity for development to occur.

### **LINEAR VERSUS NON-LINEAR DEVELOPMENT**

Although development is fundamentally dynamic, it is not linear. As Vygotsky notes (2011, p. 204) there will be leaps and zig-zags in the process of a learner's development. Vygotsky (2012) gives the example of a child learning arithmetic:

It often happens that three or four steps in instruction add little to the child's understanding of arithmetic, and then, with the fifth step, something clicks; the child has grasped a general principle, and his developmental curve rises markedly. For this particular child, the fifth operation was decisive, but this cannot be a general rule. The turning points at which a general principle becomes clear to the child cannot be set in advance by the curriculum. (p. 196)

Any classroom situation will reveal that students learn at different rates with some learning quickly in one area but lagging behind in another. Some areas of learning become fossilised and never progress much further while others are lost with non-use and have to be relearnt. Some students are able to make connections between different aspects of a topic, seeing similarities in differences and also differences in similarities while others cannot. Problems outside of the classroom may affect what happens in the classroom and motivation can fall and rise. Different students have different strategies, of which some are effective and others less so, in overcoming hurdles in their studies. Development is never straightforward.

This non-linearity of student learning conflicts with fixed school curriculums. Vygotsky (2012) notes, "Instruction has its own sequences and organization, it follows a curriculum and a timetable, and its rules cannot be expected to coincide with the inner laws of the developmental processes it calls to life" (p. 195). However, to alleviate the disparities between the curriculum and what students can learn, teachers by being more aware of their students' ZPD can adapt their teaching to their students' current state of development and learning potentials.

## **SPONTANEOUS VERSUS SCIENTIFIC CONCEPTS**

Spontaneous and scientific concepts are two different forms of knowing that are key in understanding Vygotsky's notion of learning and development (Vygotsky, 2012, pp. 155-221). A spontaneous concept is something that is learnt in a person's daily life through experience while a scientific concept is a more abstract form of understanding that is taught through systematic, academic concepts gained through schooling. Knowing that the Sun rises and sets is a spontaneous concept derived from everyday experience, but understanding that this is due to the rotation of the Earth is a scientific concept. What is important about these different modes of knowledge is that through their convergence from opposing directions, the experiential and the conceptual, development and learning occur. As Vygotsky (2012) notes:

One might say that *the development of the child's spontaneous concepts proceeds upward, and the development of his scientific concepts downward*, to a more elementary and concrete level. This is a consequence of the different ways in which the two kinds of concepts emerge. The inception of a spontaneous concept can usually be traced to a face-to-face meeting with a concrete situation, while a scientific concept involves from the first a "mediated" attitude toward its object. [Original italics] (p. 205)

Scientific concepts are mediated through collaboration with a teacher who instructs the students in an orderly, systematic way, which in turn leads to development of the students' higher-level mental functions (Vygotsky, 2012, p. 157). In contrast, spontaneous concepts are not mediated and come about by chance experiences. Despite being different and developing in different directions both are complementary and closely connected (Vygotsky, 2012, p. 205). Having a spontaneous concept of sunrises and sunsets is a prerequisite for understanding the scientific concept of the rotation of the Earth and conversely, having a scientific understanding of white light being refracted through a prism allows students to understand the everyday experience of seeing a rainbow. The upward development of spontaneous concepts grounded in everyday experiences provides the foundation for the abstract, generalisations of the scientific concepts, and the downward development of the scientific concepts gives a theoretical explanation of the everyday, concrete particulars (Vygotsky, 2012, p. 205). The ZPD is where the developing interrelations between the spontaneous and scientific concepts occur, each, as it were, only coming to fruition by the fusion of the one with the other.

## **ASSISTED LEARNING, SCAFFOLDING AND DYNAMIC ASSESSMENT**

In the context of teaching and learning, students can be helped with their learning and development with the support of adults or more capable peers (Vygotsky, 2011, p. 204). This takes place in a social, collaborative setting,

such as the classroom. It should be pointed out that pair-work and group discussions, despite being communicative, do not necessarily operate in the ZPD because there can be any number of exchanges in which students merely use language and ideas that they have already acquired. Instruction needs to be aimed at learning and development in the ZPD.

Vygotsky (1998, p. 202; 2011, p. 203) mentions different assisting techniques such as demonstrating how a problem can be solved and then monitoring the student's process of solving a similar problem; the teacher begins solving a problem and asks the student to complete the solution; the student works with more capable peers; the teacher explains the principles of solving problems; the teacher asks leading questions; and together with the student analyse the problem letting them take the leading role. There is a general cline from imitation to self-control. This mirrors Vygotsky's notions of learning and development through interpersonal and intrapersonal internalisation.

It should be noted that such assisting techniques require real-time dynamic assessment as the teacher guides the student through their ZPD and need to be appropriate to the needs of the student and withdrawn when no longer required. As Aljaafreh and Lantolf (1994) note, "help should be *contingent*, meaning that it should be offered only when it is needed, and withdrawn as soon as the novice shows signs of self-control and ability to function independently" (p. 468).

## **TEACHING AND IMAGINATION CREATE THE ZPD**

Incorporated in Vygotsky's notion of the ZPD is the idea that both teaching and the imagination create the ZPD: "We have no hesitation after all that has been said in stating the essential characteristic of teaching to be the creation of the zone of proximate development" (2017, p. 368) and "Play is the source of development and creates the zone of proximal development" (2016, p. 18). Because of these reasons and in terms of teaching, good instruction should be in advance of a student's ZAD and within the student's ZPD (Vygotsky, 2012, pp. 199-200) focusing on the ripening functions rather than those that have already ripened so enabling the student to progress from what they can do today in collaboration with another to doing the same thing independently tomorrow.

## **PLAY AND IMAGINATION**

Minick (1989) referring to the way that the ZPD is introduced in *Thinking and Speech* [an alternative translation of the title of Vygotsky's book *Thought and Language*] noted that, "The way that Vygotsky framed these arguments has created the impression that he envisioned the 'zone of proximal development' as emerging only in social interaction between the child and an adult or more competent peer" (p. 180). Immediately following this he states,

“This was clearly not Vygotsky’s view, however” (p. 181). Vygotsky (2016) in his lecture in 1933 stated that imagination creates the ZPD.

In play a child is always above his average age, above his daily behaviour; 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; in play it is as though the child is trying to jump above the level of his normal behaviour. (p. 18)

Following this Vygotsky notes, “The child moves forward essentially through play activity. It is in this way that play can be termed a leading activity that determines the child’s development” (p. 18). Here again we see Vygotsky’s notion of development moving from the social, interpersonal, external input, which is then imitated and internalised through intrapersonal reconstruction. The other-regulation of copying becomes the self-regulation of action and the child progresses through their ZPD. Vygotsky framed the importance of play and imagination in the evolving development of a child’s ZPD. However, play and imagination retain their power of development at any stage of a person’s life.

## CONCLUSION

The purpose of this investigation was to try to understand Vygotsky’s notion of the ZPD, what he actually said or wrote in published translations, and how this concept incorporates his wider notions of development. What was found was that *ближайшего* (*blizhaishego*) ought to be translated as *proximate* rather than *proximal* because it better expresses Vygotsky’s notion of a conceptual outward evolving of development. The ZPD is a conceptual area where cognitive development takes place in which immature processes mature. This development is initiated by stimulus from the environment and interpersonal interactions that are then internalised through intrapersonal processes. Progress through the ZPD occurs as the learner moves from being externally object-regulated and other-regulated towards being self-regulated. Learning and development also occur within the ZPD when the learner makes connections between the everyday spontaneous concepts and the theoretical scientific concepts. The ZPD is created both by instruction in collaboration with teachers, adults and more capable peers and also by the learner in play and using their imagination. A student’s ZPD is identified through tasks that are given in increasing difficulty, initially to determine what the student can solve independently which establishes the outer boundary of the ZAD and then with collaboration through assisted guidance and scaffolding to ascertain the outer boundary of the ZPD. Development through the evolving ZPD is non-linear requiring teachers to apply dynamic assessment in order to gauge the necessary support and when to withdraw it when no longer needed.

The final words are left to Aljaafreh and Lantolf (1994) who in their study of negative feedback utilising Vygotsky’s notion of the ZPD to second

language acquisition state:

The ZPD is the framework, par excellence, which brings all of the pieces of the learning setting together – the teacher, the learner, their social and cultural history, their goals and motives, as well as the resources available to them, including those that are dialogically constructed together. (p. 468)

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