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BOOK REVIEW

The Challenge of Developmental Instruction

Problems of Developmental Instruction: A Theoretical and Experimental Psychological Study, by V.V. Davydov, New York: Nova Science, 2008, 252 pp., $71.10 (cloth).

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Problems of Developmental Instruction: A Theoretical and Experimental Psychological Study, by V.V. Davydov, is the first book in a series entitled Perspectives in Non-Classical Psychology, the editors of which are Vladislav Lektorsky and Dorothy Robbins. As is characteristic of so many of his writings, Davydov thoroughly and painstakingly lays out the theoretical and philosophical foundations for the topics he discusses. The English translation of this book has the advantage of editors who understand their subject, a fate not always experienced by Russian works that undergo translation. Consequently, the resulting text is a clear rendering of Davydov's exposition of the philosophical, theoretical, and pedagogical foundations of developmental instruction.

The first chapter of the book is devoted to an exploration of a fundamental problem of psychology, namely, the relationship between the mind and the real world, and the theory of activity whereby the subject's activity within the sociocultural realm actually forms the mind. Addressing this issue requires insights gleaned from archeological, anthropological, psychological, and pedagogical research, and from dialectical logic and cultural history as well. Davydov cites the contributions of Spinoza, Ilenkov, Vygotsky, Leontiev. Zaporozhets, Luria, Rubinstein, and others, and asserts the primacy of external object-oriented activity and the derivative nature of internal activity. Object-oriented activity does not imply a simple deterministic reaction to the object but an active exploration of, adaptation to, and interaction with both the object and its emergent psychic reflection. Internalization, then, is the very formation of the internal plane of consciousness, rather than the transfer of activity to an internal plane already in existence.

Through participation in social and cultural activity, the individual appropriates and reproduces within his consciousness historically evolved capabilities. Davydov does not, however, subscribe to the theory that individual consciousness is simply an ontogenic recapitulation of historical stages of human development. When he addresses the upbringing and instruction of children

in the next chapter, he argues instead for the need to "investigate the correlation between the historical laws governing the formation of people's practical and cognitive activity and the adequate (though not identical) activity which reproduces in the child capacities that have evolved historically" (p. 20).

In Chapter 2, Davydov discusses Vygotsky's characterization of interpsychological processes formed through the child's participation in collective activity and their transformation into intrapsychological processes through the child's mastery of the methods of the activity, especially the semiotic tools that enable him to direct his own behavior. Also addressed are the life stages worked out by Vygotsky, El'konin, and Leontiev, and characterized by the "leading activity" that predominates in any particular period of an individual's life. These leading activities include the unmediated emotional communication with adults characteristic of infancy, followed in succession by object manipulative activity, play, learning activity, social activity, and professional learning, which extends into young adulthood. At each level the child orients herself to the cultural context, illustrated by early attempts at communication with care providers and the role playing of adult activities such as "driving" a car while holding a circular object. Such activities engender psychological formations such as imagination and the symbolic function and reflect an ongoing orientation toward activity that is both socially meaningful and socially evaluated.

All the age-related periods of the formative years are covered, but the principal one with which the book deals is that of "learning activity," the leading activity of primary school children. Davydov cautions that learning activity is not to be confused with learning, which can occur in and through many formal and informal situations. Rather, learning activity is specifically oriented toward the "development of theoretical consciousness and thinking and of the corresponding capacities (in particular of reflection, analysis, and planning), which are the new psychological formations of the primary school age" (p. 57). During this period the child appropriates through instruction culturally constructed theoretical concepts, artistic and judicial norms, and societal ethics.

The next two chapters are devoted to the subjects of empirical and theoretical thinking. Readers who are familiar with Davydov's earlier treatise, *Types of Generalization in Instruction: Logical and Psychological Problems in the Construction of Curriculum* (1972/1990), will recognize some of the material here and elsewhere in the present book as having appeared in some form in this earlier work. However, the topics of empirical and theoretical knowledge are so thoroughly addressed in these two chapters that for this reviewer they comprise the highest contribution to the value of the book. Readers cannot fail to discern in Chapter 3, for example, that despite the alternative designation of theoretical concepts as "scientific concepts," much of what is encountered in the natural sciences involves the process whereby an empirical rather than a truly scientific or theoretical concept is formed. Comparing and contrasting properties, seeking out observable regularities, and labeling the resulting conceptualization is a process of empirical concept formation and one with which students of science as well as other disciplines are quite familiar. Davydov acknowledges the importance of empirical thinking as an early stage of thought that has "great significance for all of [children's] learning activity" (p. 75) but notes that its predominance in formal schooling continues the psychological formations the child has assimilated during the pre-school period of development, rather than orienting the child toward theoretical thinking and establishing the foundation for its continued progression.

Empirical thinking differentiates and classifies the outer phenomena that are manifest to the senses, whereas theoretical thinking penetrates to the unifying essence that expresses through these phenomena and connects them as they come into expression. After the initial consideration of the concrete whole, a special type of analysis must be conducted to discern this theoretical essence expressed in the form of a contentful abstraction or "cell," followed by the tracing of its concrete manifestations and culminating in their synthesis into the concrete whole once again, now discerned as a holistic system unified through its internal connections. This is the process of the ascent from the abstract to the concrete, during which "contradictions" may be encountered that require mediation and resolution. The truly arduous nature of this undertaking can be revealed to the reader only through a tracing of the process itself in operation, and this is not provided in the text. Its worth may indeed be assumed, as it is only theoretical understanding that discerns and reflects the internal nature of reality. It is, however, necessary to engage in such a process in order to design a curriculum focused on theoretical understanding and the development in the child of the ability to think theoretically.

The cultural moment for the implementation of primary-grade curricular reforms along the lines of theoretical instruction occurred in Russia in 1958 when partial secondary education—later followed by full secondary education—became compulsory. Very early in this process of implementing developmental instruction, problem-based learning was advocated, in which children's learning activity would retrace in a manner accessible to the children, the path of creative inquiry through which theoretical understandings were historically generated. An example appears in Chapter 5 that traces in a somewhat cursory fashion the development of number from the measurement of quantities. What is provided is a chronicle of sorts of the process of searching out and modeling the genetic basis, studying its properties through transformations of the model, and deriving a system of tasks solvable by means of the universal relation itself and the application of the general method the children have internalized. Many readers will undoubtedly wish for a fuller description of the series of tasks through which this progression and assimilation of both the theoretical concept and the process of learning activity is accomplished. Considering the paradigm shift that developmental instruction requires of U.S. educators in particular—not only on the methodological level but the theoretical and philosophical levels as well—a more thorough description of the actual lessons through which the learning activity occurs would doubtless be necessary for a full comprehension of the manner in which learning activity is carried out in practice.

Additional descriptive sequences of developmental instruction in the Russian language, mathematics, and art appear in the last of the book's six chapters. The topics presented, however, are again more or less surveyed and their various essential constituents are covered with considerable brevity in a manner similar to the example found in Chapter 5. Results of research into the effectiveness of children's learning activity from a number of sites where experimental studies were carried out are also provided in this chapter. Numerous references to additional studies conducted on developmental education appear throughout the book, but unfortunately many of these have not been translated into English.

An appendix from the History of General and Child Psychology follows, and the book concludes with a supplement on "The Contemporary State of Vygotsky's Scientific School" (circa 1980s) and a lecture on "Thinking" given by Davydov to the psychology department of Moscow State University.

POTENTIAL EDUCATIONAL IMPACT

Because this book deals with developmental instruction, it is difficult to avoid wondering what impact it might ultimately have on readers in the field of education, whose backgrounds in psychology (in the United States at least) may have consisted in little more than a survey course in educational psychology that afforded only a summary treatment of leading psychological theories and virtually nothing of practical value in the way of classroom implementation. At the same time their own activity, both as students and professionals, will have immersed teachers and administrators in a cultural milieu dominated by developmentally appropriate theories of child development and a view of learning as the product of the child's own self-initiated "constructions." Neither of these positions, though currently in vogue, is aligned with Vygotskian theory or its implementation in developmental instruction. The constructivist objection to internalization is conveyed in the demand to know just how the outside world gets into the mind, which conveys the unmistakable assumption of a preexisting barrier that must somehow be overcome. The actual formation of consciousness itself through activity does away with the notion of a preexisting mind and consequently the very idea of a barrier. This is nothing less than a shattering of a deeply and widely held assumption.

Similarly, Vygotsky's exhortation to both assess and teach within the zone of proximal development stands in opposition to current practices of mandated testing with which both teachers and administrators must constantly deal. As to theoretical learning, this as unknown and alien in the contemporary educational milieu as the concept of the earth's circularity would have been in the ancient world. Hence, despite the clarity of its exposition and the fact that it deserves to be widely read and understood within the educational community, the environmental shaping of educational practitioners' philosophical, theoretical, and methodological orientations will doubtless render *Problems of Developmental Instruction* a challenging text.

Moreover, it is the case in this reviewer's experience that educators frequently tend to "read past" the profound implications so thoroughly explicated in the writings of Davydov and others in the field of nonclassical psychology. Points of apparent congruence such as the current advocacy of problem-based learning are frequently grasped at only superficial methodological levels, whereas their far deeper points of departure at the level of instructional content and pedagogical theory are bypassed altogether. Hence, at many junctures throughout the text (not only at its end despite the logic of that positioning), the inclusion of richly detailed instructional exemplars would have been extremely helpful in forming the connections required for full understanding. This is not in any way a criticism of the book itself but simply an observation of the difficulty of ensuring its comprehension by present-day educators who may bring to it very different life and professional background experiences.

Consequently, if the book is used with educators studying at the graduate level, for example, it would be beneficial to complement it with additional readings that would provide exemplars capable of illustrating the philosophical, theoretical, and methodological claims made in the book. Some suggestions along the lines of the following may be helpful in enabling educators to relate to and profit from the text. Two such references are *The Geography of Thought* (Nisbett, 2003) and *The Anthropology of Space* (Pinxten, van Dooren, & Harvey, 1983). These, as well as similar anthropological studies, document the formation of consciousness from peoples' cultural historical experience. In the Pinxten et al. reference, Chapters 1 and 5 are particularly germane. Also beneficial would be "A Thinking Laboratory: Perspectives of Prospective Education" (Kozulin,

2010), containing as it does reports of research on dynamic assessment and the manner in which differences in the zone of proximal development among individuals affect and predict their future learning. Aidarova's (1982) *Child Development and Education* can serve as a model of developmental instruction in the teaching of Russian language during the primary school years and offers insights applicable to the developmental teaching of virtually any language. The manner in which the theory of developmental instruction informs Davydov's problem-based elementary mathematics curriculum is analyzed in Schmittau (2004, 2005) and in two earlier reports (Davydov, 1975; Minskaya, 1975), which provide a more detailed examination of the example found in the present book at the end of Chapter 5. This is not an exhaustive list but merely an admittedly brief but illustrative indication of publications that could be helpful to educators in both evoking awareness of their own culturally engendered mindsets and attaining a deeper understanding of this worthwhile book.

Finally, in the ending paragraph of the last chapter, Davydov mentions the introduction of computer technology and suggests the possibility that computers might hold some future benefit for the instructional process. Given how little provocation is typically required for educational change in the name of "innovation," for this reviewer a word of caution is in order. What is not needed is a premature attempt to modify this well-researched program before it is fully understood and thereby to risk unwittingly eliminating elements that are, in fact, essential to its success. What is needed instead is the considerable investment in time and effort necessary to ensure the full mastery of the developmental instructional paradigm at all levels—philosophical, theoretical, and methodological—*before* attempting to make any modifications to it.

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