

Themes in Current Soviet Curriculum Reform

Soviet educators are first of all "upbringings." They base their teaching on dialectical materialism, assume there are law-like principles of teaching and learning, and are inexhaustibly optimistic.

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Soviet educators have historically had two purposes: to instill in students a communist world view and to train them in specific skills necessary to the economy.

Prior to 1966, Soviet educational practices were based on the belief that children should be taught habits and skills through formal rote learning.¹ Criticism of this approach to schooling, summarized in the 23rd Communist Party resolution, argued that the scientific-technological revolution required a new structure for the content and methods of teaching school subjects. The resulting curriculum and teaching revisions called for a reconstruction of the formal education of 50 million students with over 150 different languages and dialects in 15 constituent Soviet Republics. In addition, universal schooling was to be increased from 8 to 10 years. These were the first major changes in Soviet education in the last 40 years.

The reform effort was directed by the Ministry of Education and Academy of Pedagogical Sciences. Each of the Academy's 13 institutes has a particular mission, such as Curriculum and Teaching Methods, School Equipment and Technical Means of Education, and General and Pedagogical Psychology. Much of the curriculum in language, politics, science, and mathematics is designed and developed at the Academy and implemented nationwide through the Ministry of Education.²

Soviet curriculum reform was intended to increase the amount of theoretical and conceptual learning in Soviet schools and to integrate the factual knowledge of the traditional school curriculum with theoretical knowledge. From debates similar to those among curriculum reformers in the 1960s in the

United States, Soviet scholars redesigned mathematics and science curricula, producing new syllabi and a hundred new textbooks.

Analyses of school enrollment patterns, courses of study, and textbooks in Soviet mathematics and science point to a major restructuring and expansion of the scope and content of these curricula.³ Mathematics education, for example, was revised to emphasize theoretical foundations and logical rigor as well as applications. The result, according to Izaak Wirsup, a mathematician at the University of Chicago, is that "in only ten years the Soviet compulsory mathematics program for all students covers the equivalent of at least 13 years of American schooling in arithmetic, algebra, and calculus, and does so much more thoroughly and effectively."⁴ Wirsup concludes that the Soviet reform efforts have far outstripped those of the U.S. in the quality of scientific and mathematics education at the elementary and secondary levels.

A second strand of the reform movement introduced principles of cognitive growth and learning. The experiments of L. V. Zankov, for example, sought to identify principles of instruction that would enable children at each level of school to learn, as rapidly as possible, the highest level of difficulty in theoretical knowledge.⁵ Zankov's work, drawn from the ideas of Lev Vygotsky, the eminent Soviet psychologist of the 20s and 30s, was premised on the belief that teaching precedes development, that the new pedagogy should stress the emotional involvement of the learner in mastering cognitive tasks, and that teaching should be directed toward stimulating the broad interests of the child. Zankov's experiments led to a revamping of primary education, which reduced the number of years from four to three and emphasized the principles of overall development.

Currently, researchers at the various institutes are searching out ways to create social contexts of learning that emphasize the harmonious view of development and provide for an efficient use of school resources such as time, people, and materials.⁶ Their research on teaching and learning, according to American observers, involves innovative "natural" or "formative" experiments that rely principally on observation and participation in regular classroom settings.⁷

Efforts to develop and implement reforms in the Soviet schools, however, have met resistance. For example, different levels of achievement are found in urban and rural schools, suggesting differences in the implementation of the reforms. American researchers point out some of these problems, as well as the fact that Soviet ideological and political organization makes problematic the wholesale adoption of procedures and goals in an American context.

The remainder of this paper will give attention to three general themes that underlie the reorganization of curriculum and teaching in Soviet schools.

The Relationship of Pedagogical Research and Philosophy

The Soviets consciously attempt to develop an integrative approach to pedagogy that is consistent with dialectical materialism.⁸ Briefly, dialectical materialism defines thought, reasoning, and learning as a component of the activity of social beings transforming nature and self through the process of labor.⁹ Thinking is embedded in time and space, a part of the way in which individuals engage in actions to shape the

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world around them. This process is dialectical because the movement of thought and practice is seen as interrelated and involving both internal and external contradictions that produce change. The perspective can be contrasted with much American pedagogical research in which the problem is to identify the traits, abilities, or stages of development that occur within the individual, defining the ideas, categories, and mental processes as separate and distinct from the social and historical milieu in which thought and reason develop. Soviet psychology involves con-

tinual reinterpretations of consciousness and personality in an effort to bring psychological theories into line with social and philosophical debates in the larger society.

Many Americans are not aware of the linkages of philosophy to educational science in the Soviet Union. Rather than extraneous, the philosophical assumptions of dialectical materialism are central to understanding scientific work and the system of explanation that the Soviets seek to develop.¹⁰ In reviewing Vygotsky's work, Stephen Toulmin, an American philosopher of science,

argues that there is a theoretical power inherent in the attempt to understand how social activities become internalized in the shaping of consciousness.¹¹ Vygotsky sought to apply the philosophical position of Marx, Engels, and Lenin to the development of a systematic psychological theory. His theory focused on how developmental changes in behavior and consciousness are rooted in society and culture and the origin and course of this development. Vygotsky's work, Toulmin continues, has given Soviet psychology a level of interdisciplinary collaboration and intel-



lectual integration that has not been achieved in the West.

Current Soviet educational psychology seeks to extend and integrate Vygotsky's research in detailing individual students' thought processes and relating this psychological research to curriculum development. The work of the Institute of General and Pedagogical Psychology, under the direction of V. V. Davydov, has developed innovative curriculum approaches in mathematics, Russian language, and physics that draw on the theoretical foundations provided by Vygotsky. Menchinskaya, a leading Soviet psychologist of learning, traces the concept of motive to the early reaction of Soviet psychology to the idealistic position that saw consciousness only in relation to intellectual development.¹² Consciousness and motive, she asserts, need to be considered within social-historical and contextual cues.

Upbringing as a Central Focus

Soviet educators look to Western beliefs about the separation of school from politics as either naive or as a denial of culture, tradition, and morality. They believe the school is an artificially created institution to transmit culture, and culture in the Soviet Union is socialism based on Marxism-Leninism and built on dialectical materialism. The prime task of the school is the formation and maintenance of the socialist outlook.

"Upbringing" gives focus to moral/political tasks of education.¹³ When Soviet educators talk about all-around development of the individual, they mean the integration of a moral basis of action with intellectual abilities. Development of the intellect devoid of larger moral vision and purpose is considered miseducation. One further needs to understand that development of the individual does not refer to notions of individualism found in the United States. The Soviets emphasize the individual's acceptance of social goals and participation in creatively furthering those goals within a collective. From this perspective, the teaching of ideology and propaganda are viewed as a necessity of upbringing. The teacher is first of all an upbringer.

Classroom and extracurricular activities instill in Soviet youth proper attitudes, activities, and relationships. The optimism by which these tasks are organized arises historically and philosophically. The Soviets believe that following their revolution, the consciousness of the masses was reshaped to the appropriate moral attitude and world view of

socialism. Their faith is given theoretic potency through the outlook of dialectical materialism in which all gaps between knowledge and behavior are viewed as subjectively formed and remediable through intervention.

While Soviet teaching distinguishes between upbringing and teaching specific subject matter, teaching methods emphasize socialistic values. Teachers' manuals, for example, stress the importance of collective values in class interaction. The class or subgroups in the class are organized to help individuals work together to achieve some pedagogical goal such as a solution to a mathematical problem. Or, as in one school we visited in Leningrad, children were asked to respond to the school's shortage of paper by collecting newspapers and using the money to buy school supplies.

In the laboratory school of the Institute of General and Pedagogical Psychology, V. V. Rybstov has conducted experiments that use children's collectives to further the acquisition and application of physics. In these experiments and resulting curriculum applications, the structure of physics is interrelated with social/psychological structures of the classroom. In each of these instances, the organization of collectives reflects a belief that children should feel an obligation to the larger purposes of the group and work in concert to achieve those purposes. Children are to learn with their peers and from their peers, expressing their own views and cooperating.

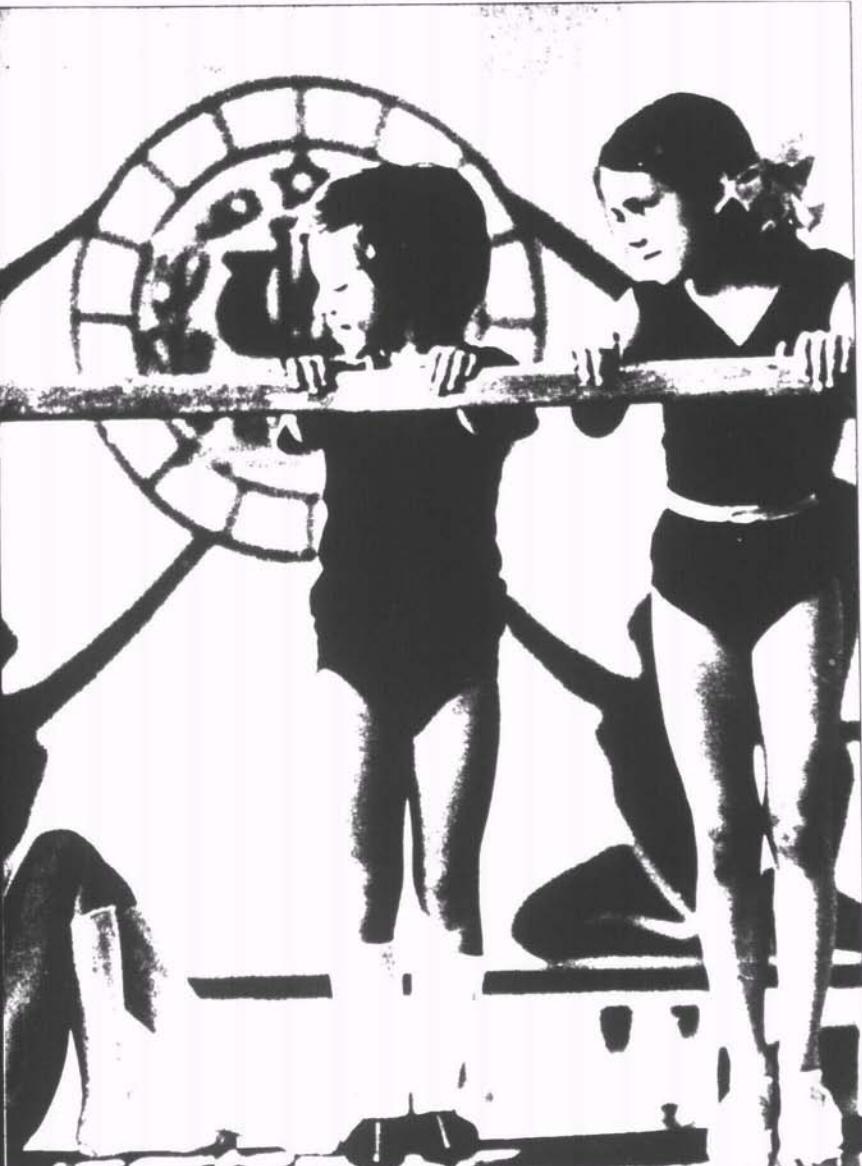
The subject matter of Soviet curriculum also focuses on problems of upbringing. Art, history, and political studies teach dialectical materialism. Mathematical examples, children's reading texts, or science problems extol the virtues and values of socialist societies. Science, in particular, fosters atheism; music and physical education teach collective behaviors.

The role of upbringing extends into extracurricular activities organized through the Ministry of Education. Every school has youth groups that contribute to the moral development of children. These groups are the Octobrists, ages 7-10; Pioneers, ages 10-15, and the Komsomol, students over 15. In schools, these groups are organized within classes to work toward social and school goals. A Pioneer detachment, for example, may help younger children study or organize games for them. Or, a Pioneer group may study a public document, such as "The Moral Code of the



Builder of Communism," including discussions of the precept, one "must study hard to serve the Motherland." Youth groups also meet after school in places such as the Pioneer Palaces. Here, they participate in club-like activities—sports, cosmonautics, ballet, or music. Although every child does not belong to these groups, many do because it is the only place that such activities occur. From a pedagogical perspective, even ballet is taught to develop collective rather than individualistic attitudes and behavior.

One cannot talk about the idea of upbringing without focusing on Anton Makarenko.¹⁴ A Soviet educator in the



1920s, Makarenko organized schools for juvenile delinquents. He saw in the school a way to seek new forms of social relations that were based on group solidarity. His reflections on the processes of developing the collective, the elements of competition, moral conditioning, and discipline still underlie Soviet pedagogical practices. One might compare Makarenko with John Dewey, whose ideas were popular in the Soviet Union in the 1920s. For Dewey, discipline was related to interests; highly interested students disciplined themselves to learn. For Makarenko, discipline was an outcome of learning.

As we look at current practices in

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upbringing, certain issues emerge. First is the continual search to improve the unity between academic teaching and upbringing. This is a major goal of ped-

agogical institutes during the next five-year plan. Second is a concern that the idealism and utopian visions of the revolution have become more rhetoric than practice. This is apparent in daily life in the Soviet Union. In most cases, Soviet citizens are loyal and patriotic; individualistic tendencies are sublimated to the group. People are honest and the streets are safe, but there is a rise in juvenile delinquency and in alcoholism. Further, in talking to people, it appears that the learning of Marxism-Leninism is often rote and only superficially integrated into consciousness.

Developing Curriculum for Soviet Schools

Curriculum development in the USSR is based on an inexhaustible optimism. Teachers, administrators, and professional curriculum developers in the Academy of Pedagogical Sciences are confident that for every teaching problem, they can invent a teaching solution. Parents are reassured by the aura of self-confidence that surrounds schooling.¹⁵

The self-confidence of educators is supported by a theory of curriculum development that assumes the existence of law-like principles of teaching, of learning, and of facts-concepts-generalizations that structure various disciplines or bodies of knowledge. The Soviets search for principles that guide learning, and on which knowledge in a subject depends, and for ways to integrate these principles with those governing successful teaching. The result is a curriculum "based on scientific principles."¹⁶ Such scientific principles must, however, be consistent with a socialist world view, not independent of it. Thus, curriculum development often begins with research that discovers something lacking; for instance, students do not place high value on manual labor; the achievement of students in rural areas is below that of students in urban areas; or with a question such as what principles of physics must students know in order to understand the subject?

Following recognition of a problem, the writings of socialist-political theorists are analyzed to establish the correct ideological orientation. (Sometimes statements of goals such as those made by Party leaders at the National Party Congress become the first step in the process.) Then professional curriculum developers, usually attached to national institutes associated with the Academy of Pedagogical Sciences, propose solutions and test them in schools. If the

results meet their expectations, the new curriculum is implemented widely as national policy.

Recently, this process led to the reorganization of the early years of schooling. Soviet scholars demonstrated children's ability to learn to generalize facts into concepts and concepts into principles of knowledge. Such teaching for generalization is efficient since more can be taught when pupils generalize knowledge than when they are taught endless facts. A second line of research established the usefulness of presenting concrete referents for abstract ideas. This led to a quicker grasp of abstractions and decreased the need for reteaching. Finally, when children's understanding was carefully developed through teaching that linked abstractions to concrete examples, pupils were able to deal with abstract ideas at an earlier age. This research led to the compression of the first four years of schooling into three years, while achievement remained the same or increased slightly.

Another example of this methodical approach to curriculum development is found in polytechnical education, which attempts to create an expression of the ideal curriculum from a Soviet point of view. Such a curriculum combines and balances ideas, attitudes, and actions on the part of students that lead to socially productive work. The "harmonious development of the individual" is expected to flow from such a curriculum in which feelings and ideas, intellect and personality characteristics are encouraged to be closely interactive.

Many studies in child development and schooling demonstrate that such a mutual dependence exists, that it is possible to affect intellectual achievement by changing attitudes and feelings, that it is possible to produce correct attitudes by leading pupils to succeed in achieving intellectual goals of schooling. As P. R. Atutov, one of its developers describes it, "polytechnical education is not only directed toward learning about the surrounding world but toward transforming one's surroundings. . . ."¹⁸

Polytechnical education has its roots in Marxist theory. Marx posited that the mediating element between consciousness and the objective world is human labor. Current Soviet pedagogical theory uses that idea as a way of legitimating modern economic production. The aim of polytechnical education is to have students learn both general scientific knowledge and practical techniques that are used in a highly developed industrial technology. Students encounter

many examples of ways basic science has influenced technological development. Students read, discuss, study, and write about their understanding; but an essential component of this form of education is the development of understanding through work. This may be through extracurricular activities or labor in factories, on farms, or in other economic enterprises related to the technology being studied.

Polytechnical education is integrated but it is also conservative. Students are encouraged to accept the production processes that exist in the Soviet Union, including methods of planning, ways of implementing plans, and the evaluation of outcomes. Ideas and actions in this curriculum encourage commitment to existing practices rather than critical analysis of the social relations produced.

Conclusions

This discussion of Soviet pedagogy may paint a portrait that seems rosy and overly optimistic and rational. Soviet schools, like our own, are extremely complex and dynamic, filled with contradictions, ambiguities as well as unanticipated outcomes.

The Soviet concern with all-around development, the careful attention to theory, the consideration of social-philosophical assumptions that underlie practice are important to understanding the particular programs and procedures found in the everyday activities of curriculum planning. While the American curriculum community may view with skepticism some of the values and assumptions that underlie these themes, the Soviet approaches point to the profound and complex social, political, and philosophical underpinnings of all endeavors to create and maintain schools. ■

¹Changes in Soviet life are tied to Communist Party policy. The Party is charged with the regulation and development of social life and production of intellectual work. Public debate occurs only in relation to how to best serve that policy.

²The center-to-periphery model, however, is complex. Each of the 15 constituted republics has research institutes and research is conducted in teacher-training institutes that are separate from the academy. (For a discussion of this complexity see T. Popkewitz and B. Tabachnick, "Soviet and American Pedagogical Research: Differences and Similarities in the Two Countries," in *Studying Teaching and Learning: Trends in Soviet and American Research*, B. Tabachnick, T. Popkewitz, and B. Szekely, eds. (New York: Praeger, 1981), pp. 3-38.)

³See, for example, R. Davis, and others, *An Analysis of Mathematics Education in the Union of Soviet Socialist Republics*. Clearinghouse for Science, Mathematics, and Environmental Education. Athens: Ohio State University, 1979; and M. Klenetsky and C. White, "Meeting the Soviet Challenge in Education," *Fusion* (October 1980): 67-78; T. Popkewitz and B. Tabachnick, "Soviet and American Pedagogical Research: Differences and Similarities in the Two Countries," in *Studying Teaching and Learning*, pp. 3-38.

⁴See I. Wirsup, "The Soviet Challenge," *Educational Leadership* 38, 5 (February 1981): 358.

⁵L. V. Zankov and others, *Teaching and Development: A Soviet Investigation*, ed. B. Szekely, (White Plains, N.Y.: M. E. Sharpe, 1977).

⁶This is discussed in Popkewitz and Tabachnick, "Soviet and American Pedagogical Research."

⁷For discussion of the Soviet idea of experiment, see Davis and others.

⁸R. Bauer, *The New Man in Soviet Psychology* (Cambridge: Harvard University, 1952).

⁹The issue of the origins and development of thought became a preoccupation of Soviet philosophy following the revolution and continues today as a major dimension of Soviet psychology and philosophy. See Ilenkov, *Dialectical Logic* (Moscow: Progress Press, 1977).

¹⁰L. Graham, *Science and Philosophy in the Soviet Union* (New York: Vintage, 1974).

¹¹S. Toulmin, "The Mozart of Psychology," *New York Review of Books* 25, 14 (September 28, 1978): 51-57.

¹²N. A. Menchinskaya, "Some Aspects of the Development of the Soviet Psychology of Learning," *Studying Teaching and Learning: Recent Trends in Soviet and American Research*.

¹³See, for example, J. Dunston, "Soviet Moral Education in Theory and Practice," *Journal of Moral Education* 10 (3): 192-202; K. Weaver, *Russia's Future, The Communist Education of Soviet Youth* (New York: Praeger, 1981).

¹⁴A. S. Makarenko, *The Road to Life* (Moscow: Progress Press, 1951).

¹⁵See, for example, discussion in B. Szekely, "Introduction: Soviet Educational Research and the Soviet Seminar Contribution," in *Studying Teaching and Learning*.

¹⁶See, for example, V. V. Kraevskii, *Relation of Pedagogical Science and Pedagogical Practice* (Moscow: Knowledge, 1977). (In Russian.)

¹⁷In a few cases, republics of the USSR will insist on curricular components that are relevant to local cultural characteristics and, in matters of use of local languages in instruction and teaching about local historical and cultural heroes, they have won the right to deviate from the national curriculum.

¹⁸P. R. Atutov, "The Polytechnical Principle in Teaching Basic Science" in *Studying Teaching and Learning*, pp. 238-241.

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