

PRIMARY & SECONDARY EDUCATION

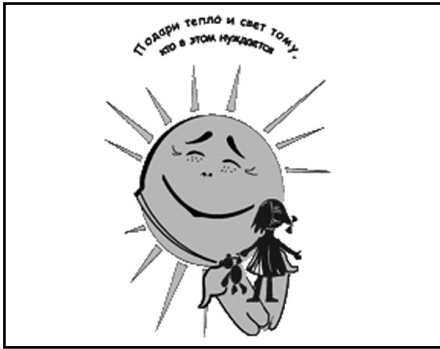


Reorienting Tatarstan's educational system towards education for sustainability

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Introduction

The Republic of Tatarstan²⁹ is located about 700 km east of Moscow and is one of the largest republics of the Russian Federation. It is a semi-autonomous, multi-ethnic Republic with a population of four million people, representing a diverse mix of three main cultural and religious groups: Mongol/Asian from the east of Eurasia (10%), Muslim Tatars from the south (50%) and Russian Orthodox Christians from the west (40%). A similar cultural and religious mix led to war in Yugoslavia; however, Tatarstan has chosen a different course focusing on the need to protect its natural environment and create conditions that promote tolerance, social justice and peace.



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²⁹ Tatarstan is located in the centre of the Russian Federation on the East European plain. People of more than 70 different nationalities live there, the most numerous being Tatars and Russians.

In early 2001, the Parliament of Tatarstan embraced the principles of sustainable development expressed in the Earth Charter and instructed governmental agencies to find practical applications for its principles in their work. The Republic of Tatarstan has implemented various programmes on ecological education and is presently developing economic mechanisms for the management of natural resources and the reconstruction of destroyed ecosystems.

“We should bear in mind that this is not just an ecological programme. It integrates economy, politics, ecology, and education. It works for the sake of ethnic-religious tolerance and for the advancement in the living standards of our people.”⁵⁰

Within the framework of the existing project, *Tatarstan: Territory for a Culture of Peace, Sustainable Development and Tolerance*, the Republic has launched a large-scale effort to implement an Earth Charter and Culture of Peace Programme throughout its educational system. In accordance with the decisions of the Parliament, the Ministry of Education and Science is shifting its traditional discipline-oriented curriculum towards a competency-based model, built around a number of themes and areas of learning. The Ministry now sees its main task as educating the new generation of Tatar citizens to be responsible and active citizens seeking solutions to environmental problems, promoting responsible management of natural resources and sustainable lifestyles, and creating a culture of peace and tolerance.

The Ministry considers the Earth Charter as an appropriate ethical framework for educating the next generation of engaged citizens, who will live and work in a context of rich cultural traditions and diverse religious backgrounds. Tatarstan is indeed fertile ground for three key concepts embedded in the Earth Charter: respect for all life, respect for one another, and respect for the Earth.

Kindergarten and pre-school education

In consideration of its rich cultural and religious diversity, Tatarstan has developed a specific system of kindergarten and preschool education based on the

principles of respect and care for other human beings. This includes compassion for those who have less and for those who belong to different cultures and religions. With some ethnic Russians practicing Islam, and some Tatars practicing Christianity, all the people of Tatarstan have a common interest in caring for the Earth and its living community, and in undertaking the common quest towards the restoration of their devastated environment.

Kindergarten and preschools provide an opportunity to begin the process of developing children’s attitudes and values of cultural tolerance and care for the community of life. From the age of three to six years, children are the most open to being informed about nature, the interconnectedness between all living beings, the basic principles of a sustainable way of life, and moral and ethical behaviour. Preschool institutions in Tatarstan are focused on creating a special educational environment to enhance children’s capacity for development, and the development of age-specific educational methodologies. A lot of attention is being given to the creation of special green areas, flower gardens and vegetable strips, so-called ‘Alpine hillocks,’ and to ecological pathways, where the youngest children can play, study and learn outside.

Teachers use nature and its beauty to demonstrate the wonder of nature’s richness, and to explain the importance of protecting plants and animals, fertile soils, pure sources of water, and clean air. Small children are deeply moved by visual, aural, and oral interactive activities presented in the form of plays, songs, poems and fairy- and folk-tales. For example, it is a common practice to use traditional Tatar and Russian proverbs, sayings, tales and songs as an unobtrusive way of introducing important, and sometimes abstract, concepts in a flexible and interactive manner.

Combination of formal and nonformal education for sustainability in secondary schools

Many educators often use the concept ‘education for sustainable development’ (ESD) in order to describe the pedagogical activities of environmental education.

⁵⁰ M. Shaimiev, president of the Republic of Tatarstan in his Annual Address, 2007.

However, the former cannot be seen as a mere sum, or combination, of the goals of environmental protection and the improvement of the quality of human life. Environmental education has many approaches, which include: education about the environment, focusing on increasing levels of knowledge and awareness of the environment; education in the environment, involving the developing of attitudes and skills through experiencing the natural environment; and, the more radical, education for the environment approach, analysing power bases and social structures, incorporating Southern voices and seeing the environment as socially determined (Downs, 1994 and Tilbury, 1995).³¹

The national system of secondary education in Tatarstan is taking initial steps to integrate the Earth Charter principles into educational processes built around the interdisciplinary model – the interrelationship of formal curriculum and extracurricular activities, with the help of elective studies and scientific and study groups of students.

The introduction of the subject 'environmental studies' into the secondary school curriculum may seem to be an outdated activity given the advent of education for sustainability. However, this has been a revolutionary step for the education system of the Republic of Tatarstan. The main goals of this new educational initiative are to increase the presence of environmental education within the formal curriculum in Tatar schools; to improve it through the integration of environmental issues across a number of disciplines; to enhance teachers' interest in democratic ideas and processes; to support teachers to use various environmental education methodologies; and to encourage teachers and students to become actively involved in the protection and conservation of the natural world.

The Ministry of Education and Science takes pride in the fact that almost 150 secondary schools in the republic have included the subject 'environmental studies' in the formal curriculum of their secondary and senior years. Today, more than 5,000 students attend elective studies in ecological research, economic development, and social issues while approximately 9,000 students

participate in 553 ecological study groups. Students are encouraged to become actively involved in the preservation and improvement of their immediate surroundings, which in turn develops a sense of responsibility towards the environment. Through this process of learning, the Ministry aims to shape a new generation of engaged citizens that will prevent environmental crises from deepening, protect nature and promote a more healthy society.

These scientific, action-based research programmes in secondary schools focus on:

- The indepth study of nature
- The assessment of the ecological situation in the students' local habitat area, including the consequences of human impact on nature
- The state of the population's health, and the creation by students of indicators for ecological monitoring

In spite of these achievements, the lack of substantial materials and methodologies on education for sustainable development was felt acutely by the Ministry, educational research institutions and school teachers. This situation needed to be addressed.

Methodology and curriculum development

Within the context of Tartarstan's Parliamentary Resolution to implement the Earth Charter principles, the Ministry was given a special assignment to prepare and publish three textbooks on the Earth Charter, for primary-, middle- and high-school students. The content of the textbooks had to include issues relating to both natural and social sciences based on international experience, and also include a special "Earth Charter course" for teachers.

The Ministry developed a five-year action plan as a result of consultations with experts and secondary school teachers to find better ways to integrate sustainable development issues and the Earth Charter principles into formal and non-formal education in the Republic.

³¹ Downs, E. "Education for Sustainability: is the whole more or less than the sum of the parts?" *Development Education Journal*, Issue 2, December 5-8, 1994.

Tilbury, D. "Environmental education for sustainability: defining the new focus of environmental education in 1990s." *Environmental Education Research*, 1 (2):195-212. 1995.

This plan defines the development of the pedagogical curriculum and sets the direction for practical work, for teachers and students.

As of 1 September 2007 (the official start of the 2007-2008 school year in the Russian Federation and Tatarstan), every public school in the republic was provided with an Earth Charter toolkit: student textbooks and guidebooks for the teachers. This new set of education materials was developed by several working groups of prominent scientists from the Republican Research Institute for Educational Development.

The Earth Charter toolkit

Teacher's guidebooks, tailored to different grades and subject areas, were developed for three sets of teachers:

- primary school teachers
- secondary school teachers of history and social sciences
- secondary school teachers of natural science

The need to introduce primary school students (grades 1–7) to the basic principles of ecology, culture and human relations is reflected in the methodological recommendations for primary school teachers. In order to ease the introduction of complex issues to small children, the guidebook shows how to effectively use field trips, children's literature, folk- and fairy-tales, as well as interactive, solution-oriented tasks.

The full text of the Earth Charter is included in the guidebook for teachers of history and social sciences at secondary schools (grades 8–11). The methodology of the application of the Earth Charter as a framework is recommended for teaching the themes of General History, History of the Russian Federation, and Social Sciences.

The guidebook for teachers of natural science at secondary schools (grades 8–11) offers methodological materials and sample lesson plans for various subjects: Math, Russian Language and Literature, the Arts (music, drawing, and acting), English, and Political Science. It

also offers innovative suggestions on extracurricular activities related to ESD.

The toolkit offers teachers various lesson plan models for classroom use. The first recommended methodology is presented as an interdisciplinary study of a complex problem covering different subjects. For example, as teachers present the problems of the modern economy, they motivate students to learn about existing unsustainable methods of production and consumption. Students are also motivated to study ways to adopt behavioural patterns and choices that promote the development of economy and industry while safeguarding Earth's regenerative capacities, human rights and community wellbeing.

As students learn about social relations, they are encouraged to know more about racial, ethnic and religious conflicts, social injustice and ways to prevent and address these issues. Several lessons are dedicated to Russia's place in the global community, and the challenges and drawbacks of its transition from a centralized to a market economy (using Pillars II and III of the Earth Charter in the analysis, "Ecological Integrity" and "Social and Economic Justice"). The combination of the national and regional components of the suggested methodology gives students the opportunity to become aware of interrelationship of the issues and problems facing local and global communities.

Authors also suggest that another methodological approach is to have students examine one of the Charter sections, principles or sub-principles, reflect on these, and then share their reflections with their friends, families, and community members.

The Ministry has announced a series of demonstration lessons, based on the methodologies to integrate sustainable development, the Earth Charter and the new educational materials into daily teaching practices. The demonstration lessons will be held simultaneously in all schools of the Republic. Some of these lessons will be open to media coverage.

The Ministerial website (<http://www.tatedu.ru/>) provides many resources to support education for

sustainable development and the Earth Charter. Among other materials, it offers the Russian version of the Earth Charter Guidebook for Teachers "Bringing Sustainability into Classrooms" developed and published by the Earth Charter Initiative. The website also displays a variety of sample lessons on sustainability, ethical values and principles, and suggests an interdisciplinary approach as the guiding methodology. It also serves as a discussion forum and gives space to teachers to share their educational experiences and scientific research in education. The Ministry will also identify those key educational institutions that will serve as clearinghouses for new methodologies in teaching and learning for sustainability.

In September and October 2007, the Ministry convened a series of seminars and roundtables for teacher trainers and in-service school teachers. In the context of this training initiative, the Ministry announced a contest for the best project on the vision of a 'school of the future.'

Innovative approaches to extracurricular (elective) education

Teachers are given the opportunity to independently design small-scale education projects focused on developing students' competences and skills in dealing with environmental and social challenges. Within the context of the generally-approved formal educational curriculum, these mini-projects provide curricular opportunities to build on students' initiative and ability to become responsible citizens – in particular in a society undergoing a major transition to an open and democratic society. It is very important to provide teachers with a certain degree of independence in developing their own pedagogic approaches and methodologies, as this enhances their sense of responsibility and confidence in curriculum development. The main requirement for teachers to participate in this initiative was the use of an interdisciplinary approach to developing their methodology. This has improved the cooperation and connection between colleagues who teach different subjects.

Although knowledge is a powerful tool, it doesn't mean anything unless it's used for the improvement of

humankind and the preservation of nature. This is why it's important to boost students' interest in learning and getting more deeply involved in practical activities. A variety of ongoing, nation-wide initiatives promote this outcome.

Students' participation in national contests such as My Little Homeland, Nature's Corner, and Nature's Mirror, encourage students to research natural, national, historical and cultural heritages of Tatarstan and Russia, and teach them to treat the community of life with compassion and care. The following are descriptions of two such contests.

My Little Homeland

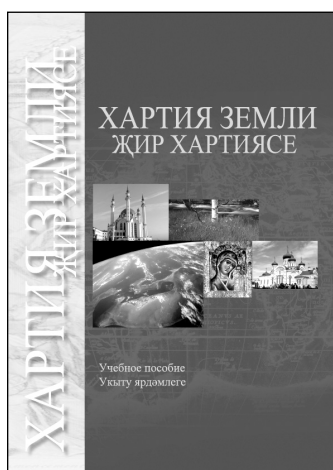
In order to enhance students' feeling of ownership and pride about their national history, traditions and culture, the ministry holds an annual national contest entitled "My Little Homeland." This features three possible focus areas: "A little corner of great Russia," "History," and "Our national traditions." Participating students get to know the historical uniqueness of their own villages and towns; compile biographies of their fellow-villagers who made a difference in the history of the town and nation; study the culture and the genealogy of their family and clan as well as the culture and folklore of the peoples that live in their region; and learn about their relationship with nature.

The Young Shoot

In the context of the international Earth Charter Initiative, students participate in an annual contest entitled "The Young Shoot: Preservation of Nature and Care for Forests." The focus areas are: "The ecology of the wildlife," "The ecology of wild plants," "Forestry," and "Forest in Literature." To participate in these contests, young forestry specialists must research complex environmental issues such as the greenhouse effect, forest degradation, the formation and depletion of the ozone layer, acid rain, overpopulation, and pollution, as well as possible methods and means for solving these problems.

Apart from the contests, there are many opportunities for student learning and action. There are more than

200 school-protected forest areas, where students provide tangible assistance to forest wardens and biologists – planting new trees, green belts, and picking wild medicinal herbs. Students organize contests, quizzes, and discussions with the members of their communities; put on environmental plays; hold exhibitions; clean parks and gardens; plant new trees; clean school territories and neighbouring communities; take care of forest springs; hold conferences on consumerism; and create, publish and distribute educational leaflets calling for more sustainable lifestyles.



Textbook *The Earth Charter for secondary Schools* published by the Ministry of Education of Tatarstan.

One of the important conditions for the accomplishments described in this case is the unique atmosphere of national and religious tolerance in the republic; the culture of peace and cooperation; and love for nature. These are rooted in centuries-old traditions that are carefully being preserved in modern-day Tatarstan.

Learning and living the principles of the Earth Charter is a powerful way of introducing the message of sustainability. It also provides opportunities for those who want to teach and learn about ethics and a broad vision of a sustainable society. The formal education system of Tatarstan leads the way in offering an interdisciplinary and values-driven approach to addressing the complexity of sustainability issues in secondary education. This initiative demonstrates that education can and should play a greater role in developing students' active citizenship, environmental awareness, and sense of respect and responsibility, which will support the political and socio-economic transformation towards a more mature democracy.

Conclusion

The activities described above contribute to raising student awareness and involvement, inspiring young people to live and act in harmony with the ethics and principles of the Earth Charter. The engaged participation of the Tatarstan leadership – in the implementation of sustainable development values in the formal education system – have contributed considerably to the implementation of the new educational initiative.

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