



“Critical Issues Forum” in Russia¹

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“Education is quite simply, peace-building by another name... Experience and learning are indeed crucial pillars of peace,” Kofi Annan, former UN Secretary General.

Today, there is a critical need for education of the younger generation in the fields of weapons nonproliferation and security. With the beginning of the new century, humankind is faced with qualitatively different risks and challenges, such as nuclear weapons acquisition by new states and international terrorist groups, which significantly increases the problem of proliferation. Prevention of nuclear weapons proliferation is widely acknowledged by Russia, the United States, and other states as one of the main national and global security challenges. However, changes within the global environment and the threat of proliferation demand new answers to these new challenges. The answers must come from the younger generation, whose knowledge of nonproliferation and peacekeeping is forming at present – during their school years. To encourage understanding of these new risks and challenges, security and nonproliferation issues must be included in school curricula and facilitate the development of critical thinking for further understanding of these issues.

The UN Study on Disarmament and Non-Proliferation Education, conducted in 2002, noted that education is an important tool for peace and disarmament. The study emphasized “a pressing need to expand and improve disarmament and nonproliferation education and training in order to promote disarmament and non-proliferation and to strengthen international security and enhance sustainable economic and social development.” Hence, the development of programs for school children, which aim to educate and introduce methods of analytical work on key issues in the nonproliferation and global security arenas, is essential and timely.

One such program is the “Critical Issues Forum” (CIF) – the international educational program of the James Martin Center for Nonproliferation Studies (CNS) at the Monterey Institute of Nonproliferation Studies, conducted with participation from the Nuclear Cities Educational and Information Center (NCEIC) in Novouralsk, Russia.

The goal of the program is to promote understanding of nonproliferation and global security issues, as well as to develop analytical thinking, for high school students in the United States and Russia. Based on this goal, originally developed by Los Alamos National Laboratory, CIF helps high school students to:

- form individual opinions on WMD and global security issues;
- develop critical thinking skills;

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- learn to understand relationships between technological concepts and their practical applications in life.

This task can only be accomplished through an interdisciplinary approach to the issues. CIF participants, therefore, study the scientific, technological, economic, social, cultural, political, and geopolitical aspects of security and nonproliferation. Moreover, as an important part of the project, both students and teachers learn to use information technologies through increased computer literacy.

Introduction of CIF to US schools began during 1997-1998. Partnerships with Russian schools from closed nuclear cities have been ongoing since 2001. The first Russian participants were students and teachers from the closed cities of Novouralsk, Zheleznogorsk, Sarov, and Snezhinsk. In 2002, they were joined by a school from the city of Lesnoy. During 2003-2006 active development of partnerships with schools from Seversk, Zelenogorsk, Tryokhgornyi, Zarechnyi, and Ozyorsk was ongoing. In 2007, the forum for the first time brought together representatives of schools of general education from 10 closed nuclear cities of Russia.

The CIF curriculum is implemented within a school year timeframe and is composed of three stages: training of teachers on nonproliferation issues; independent work between teachers and students targeted towards the development and writing of research projects; and a conference, where the students present their projects.

CIF topics, which change from year to year, are selected by program organizers and an expert panel. Topics of previous forums have included “Nuclear Weapons and Nonproliferation,” “The Proliferation of Chemical and Biological Weapons and Terrorism,” “Weapons of Mass Destruction in the Middle East and South Asia,” “Nuclear Issues in Northeast Asia,” “Radioactive Materials and Radiation Weapons,” and others. At the 2006-2007 forum participants discussed the issue, “Outer Space: Next Frontier for Proliferation or Forum for Cooperation?”

Annually, during the fall months, Russian and American high school teachers participating in CIF receive training at CNS in Monterey, California. During the teacher development workshop, they become acquainted with issues for the selected CIF topic and study new pedagogical methodologies intended to motivate students working in the field.

The training workshop for teachers includes lectures on topics related to ongoing projects, conducted by CNS staff and guest experts, as well as discussion of process and evaluation of research projects and proposed activities within the schools.

Special attention at the conference is devoted to forms of presentation such as animations, videos, interactive games, and analysis of political cartoons, which are based on the use of new technologies and intended to stimulate interest in the topic. The program also devotes significant attention to independent work teachers pursue with their students after the workshop. In Russian schools, such work is conducted in the following three ways:

- teaching of English classes with the use of CIF materials;
- development of electives;

- organization of extra curricular activities.

In order to attract the attention of students to current critical issues, some teachers have developed a range of courses and individual presentations based on CIF annual meetings and have included them in the English study programs. For example, in 2006-2007, during the course of work on the project “Outer Space: Next Frontier for Proliferation or Forum for Cooperation?” the teacher at school # 41 in Novouralsk, Natalia Tolochko, included into the module “Space horizons” an overview of the following topics: “Russia’s Space Program,” “Space Infrastructure,” and “Space and Security” through videos, computer games, and photos.

Students particularly like creative projects that involve role playing. A teacher at the lyceum of physics and mathematics in Ozersk, Svetlana Totina, prepared lessons this year with the use of documentary films “The Complete Cosmos” (York Films Ltd) and “Planets” (BBC) to help students gain a broad understanding of the issue. She then created an elective course titled “From the History of Space” to help students develop their critical thinking skills on space security issues, as well as analyze information and lead discussions.

For two years a teacher at school #164 in Zelenogorsk, Nelli Porseva, has conducted elective courses “English as a Language of Resolving Critical Issues of the Present” and “English Language in the Fight against Global Terrorism.” During her classes, Ms. Porseva develops students’ critical and rhetorical skills, teaches the use and evaluation of Internet resources as reference materials, and helps students shape their individual positions as world citizens based on a detailed analysis of the problems of today. She employs different approaches to the work: research; creative projects, such as creation of Internet websites; posters; articles; and essays. One of the positive aspects of elective courses is the ease of their adaptability to developments in the news and rapid global changes, which attract student interest. During this school year, as part of her courses, Ms. Porseva has reviewed topics such as “Space and Nonproliferation Issues,” “The Problems of Overpopulation,” and “Environmental Disasters.”

In school #76 in Lesnoy, extra curricular activities are a significant part of nonproliferation education. As part of its preparation for CIF international conferences in Monterey, school #76 has engaged in student-initiated and -organized work: school mini-conferences, exhibitions of creative work, presentations of projects on nuclear nonproliferation topics, and meetings with experts from the nuclear facility. In the school museum, one of the exhibits includes comprehensive information on CNS at the Monterey Institute and on the Critical Issues Forum. In 2007, teacher Olga Romanova developed recommendations that would help the students prepare their research projects.

In the “Didact” school in Zarechnyi, the teacher Lyubov Khlystova has organized extra curricular activities for middle school and high school students on the topic “Space and Mankind.” On January 17-18, high school students presented research papers on the topics of space security and international cooperation, as well as other pertinent topics. The best research papers were published in the school journal *The Mirror*.

In the School of Cosmonautics of Zheleznogorsk, there is a functioning “Nuclear Nonproliferation” research laboratory. Courses in the laboratory teach students skills that allow

them to conduct independent study in nonproliferation. They then select a topic and conduct research projects as part of the work in the laboratory. Since 2000, the School of Cosmonautics has annually conducted a conference titled “Kurchatovskiye Chteniya” (“Kurchatov Readings”) and summer school “Sokhranim Mir” (Save the World), the goal of which was to develop in youth a positive view of nuclear energy, novel scientific technologies, problems of WMD proliferation, international security, and the fight against terrorism. Students of the Seversk gymnasia and gymnasia #164 from Zelenogorsk have also participated in the “Kurchatov Readings.”

Students at the Seversk gymnasia in the town of Seversk attend an after-class course titled “Problems of Security and Nonproliferation of Nuclear Weapons,” which takes place at the Seversk State Technical Academy.

Participation in CIF projects carries great significance in the upbringing of the future generation within the closed cities, because it provides an introduction to many global problems facing mankind. Prior to the existence of CIF, Russian high school students had limited understanding of nonproliferation and international security issues. At present, the students understand that even they can play a part in the creation of a peaceful and secure society. Awareness and understanding of problems are conducive to nurturing community involvement among the younger generation. The impact of CIF projects goes beyond school boundaries, as children cover current events in their articles and letters to the local newspapers and the mass media.

At the same time, younger citizens of closed cities are the future residents and workers of nuclear facilities. Ensuring a cadre of new professionals to enterprises within the nuclear-industrial complex is a critical issue worldwide. Hence, nurturing students’ interest in a career in the nuclear industry is one of the goals of the social policies of the closed cities. Schools in the closed cities pay close attention to these goals, attempting to encourage students to pursue their education at universities under the auspices of Rosatom after they graduate from high school. For multiple reasons, many of the industrial enterprises can count only on the local population pool for replenishment of the workforce. The schools, in this particular aspect, play a role in helping students to develop a responsible relationship with nuclear energy. And the CIF program is crucial to this process as it helps the students of Russian nuclear cities to understand the risks and threats related to nuclear energy, as well as the political and legal aspects of nonproliferation.

It is notable that for many students in schools with advanced study of English, the CIF program opens additional opportunities for the future as they become aware of careers within the nonproliferation regime (for example, in export control). This benefit significantly increases the value of the CIF project for professional development.

In conclusion, it is essential to point out the importance of the intercultural exchange within CIF between teachers and students from Russia and the United States. This interaction is conducive to the expansion and strengthening of cultural and educational linkages, because participants from both sides have the opportunity to discuss issues related to youth and education in the contexts of one another’s cultures and traditions. In addition, an exchange of novel ideas occurs between the younger generation and the teachers. As ambassadors of their peoples and countries,

CIF participants promote public education in disarmament and nonproliferation issues, mutual understanding of cultures, and the formation of a culture of tolerance and nonviolence.

Even with their cultural and traditional differences, CIF participants are united by the realization of the threat of nuclear weapons and the risks of nuclear energy. The future belongs to them. It is vital that the younger generation knows that every individual is responsible in all that goes on in the world. It is symbolic that program participants from the Russian side are from the “closed cities,” where for many years, scientists have engaged in development and creation of nuclear weapons. The participation of the closed cities is the best proof that today we are aspiring to find a peaceful resolution to the complex problems posed by dependence on the atom. Through education, understanding, and interaction, these young citizens will be creating a world free of nuclear weapons.

(The author serves as coordinator of the CIF program in the closed nuclear cities of the Russian Federation and director of the Nuclear Cities Education and Information Center (NCEIC) in Novouralsk. From 2002 with the assistance from CNS, NCEIC is developing and implementing projects dealing with nuclear nonproliferation issues in Russia, in which high school students from Russia and the United States take part. For additional information, please, contact NCEIC director Lyubov S. Schekaleva at nceic@novouralsk.ru)