

Evaluation of the Step by Step Program **EXECUTIVE SUMMARY**

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BACKGROUND AND PURPOSE

This program evaluation was funded in 1998 by the United States Agency for International Development (USAID), as part of the Improving Educational Quality Project (IEQ) II. The overarching purpose of the evaluation was to gain a better understanding of the role of child-centered learning strategies in creating democratic, collaborative behaviors at the local level for newly independent states of Eastern Europe and Central Asia. As such, it supports USAID/ENI's strategic goals of democratic transition and social stabilization by examining the role of participatory educational practices in promoting democratic behavior.

The evaluation focused on Step by Step, an ongoing and growing early childhood development program in the ENI sector. Working with host country researchers in four countries—Bulgaria, Kyrgyzstan, Romania, and Ukraine—Education Development Center, Inc. (EDC) examined Step by Step's impact on children, parents, and communities. First, we compared the educational performance and developmental progress of preschool children enrolled in the Step by Step program with children in traditional programs. We also investigated the program's effects on families, teachers, and school administrators. Third, using a range of methods, we examined Step by Step programs' institutional capacity and uptake in key educational systems in order to gauge its sustainability. Finally, as with all IEQII initiatives, we sought to build the capacity in applied evaluation and assessment techniques within host countries.

Importance of Evaluating This Model

Since its inception in 1994, the main objective of the Step by Step program has been to turn formerly state-supported day care facilities into centers for child development which promote learning and encourage democratic behaviors among children and their families. Funded by the Open Society Institute (OSI) the Step

by Step model was developed by Children’s Resources International, Inc. (CRI), the technical assistance provider to the network of programs around the world. There has been an increasing demand for Step by Step and the enrollment figures are impressive. What began as an ambitious pilot in 15 countries with 250 classrooms is now an accepted educational program in 26 countries with more than 5,636 classrooms implementing the Step by Step methodology. The program now extends beyond preschool to primary school, infant and toddler care, and orphanages. Over time, the Step by Step model has also formalized its outreach to institutions of higher education and national ministries responsible for teacher training and educational policy.

Increasing demand for the program, informal accounts of its impact, and the energy devoted to creating an infrastructure to be self-sustaining have suggested that Step by Step has been highly successful in reaching its goals. Consequently, USAID has undertaken this rigorous evaluation to determine whether these child-centered practices lead to more democratic behaviors at the local level.

The importance of child-centered, participatory learning programs for promoting democratic behaviors among young children, and the emphasis on family and community participation, suggest an important learning opportunity within ENI countries about the role of education in fostering local empowerment. The program offers a promising model for encouraging community initiatives to meet social needs. The involvement of local research institutions has created an institutional capacity for program assessment that can be used to improve pedagogical practice.

METHODOLOGY

To evaluate the impact of Step by Step, we used multiple methods including a quasi-experimental design and qualitative approaches. Quasi-experimental methods were used to compare two types of programs—Step by Step and traditional kindergartens—on measures of program quality and children’s learning.

We also collected qualitative data that addressed Step by Step programs' sustainability and related capacity to stage other community-based initiatives.

EDC's research team worked closely with the staff of CRI, in-country research coordinators, and the Step by Step leadership within each host country to refine study methods, develop and pilot test instruments, and gather and analyze data. Together, we devised research methods and instruments to address the seven main research questions. The findings below are organized by these questions.

FINDINGS

The overall picture that emerges from our analysis of surveys, interviews, and observational data is that Step by Step is growing rapidly, retaining high standards, and becoming an important setting for nourishing democratic practices in these four countries. Our child assessment data provide strong evidence that children are being educated at least as well (and, at times, better) as children in traditional programs. Step by Step's strong position in local communities is reflected in the extensive parental support it receives and its increasing reach into the community. Step by Step has also influenced the educational systems of entire countries through its impact on higher education and its growing acceptance by national education officials. Thus, many indicators demonstrate that Step by Step has evolved into a high-quality program that is sustainable.

Question 1: Are the Educational Performance and Developmental Progress of Step by Step Children Comparable to Those of Children in Traditional Programs?

Our answer to this question is an unequivocal "yes." Across all countries and on every dimension we found that Step by Step children perform as well as, or in some cases exceed, the performance of children in traditional programs. Overall, the academic benefits of Step by Step are most evident in the realm of mathematics, with significant effects favoring Step by Step in three of the four countries. Such findings might reflect the emphasis on exploration in Step by Step classrooms. As children experiment with objects and quantities in different

activity centers, they have opportunities to construct notions of relative quantity and, when teachers join them in their explorations, there are many occasions when discourse about mathematical concepts can occur.

Some differences favoring Step by Step were also seen in literacy learning, including receptive language. At first glance these findings are somewhat surprising since formal literacy instruction is emphasized in traditional programs. However, these findings are more understandable when viewed in light of the nature of teacher-child interaction in Step by Step classrooms, specifically its emphasis on extended conversations, daily book readings, and writing activities.

Overall, our assessments of creativity did not yield significant differences between children in Step by Step programs and children in traditional programs. An exception to this finding was in the *Unusual Uses* activity. Results here indicated greater creativity among Step by Step children, particularly in their ability to think in flexible ways. Such a finding provides evidence that Step by Step classrooms are, in fact, more effectively nurturing children's creativity.

Finally, when we inspect frequency distributions for children from the two types of programs, we consistently find that Step by Step programs seem to provide greater support to children who enter with less well-developed academic skills. This finding suggests that Step by Step's child-centered approach enables teachers to implement a program that is responsive to children's individual needs, rather than one that is dictated by a set curriculum. Since one of the critical components of Step by Step is individualizing the curriculum for children, our data indicate that teachers are making such curricular adjustments skillfully.

Question 2: What Democratic Concepts are Children Learning in Step by Step Classrooms (e.g., making choices, taking initiatives, valuing individual expression, and contributing as a member of a learning community)?

If one accepts the basic premise of this report—that high-quality, child-centered early childhood practice is consistent with democratic principles—then our results provide overwhelming evidence that children in Step by Step programs in all four

countries are learning and playing in environments that promote democratic behaviors and ideals. The magnitude of the difference between the two programs, apparent from classroom observation data, points to the enormous distance that Step by Step teachers have traveled on their journey to creating democratic schools.

The principal data source for these findings was an adapted version of the Early Childhood Classroom Observation instrument (ECCO), which was used by trained data collectors as they observed Step by Step and traditional classrooms. The summary scores for the ECCO subscales provide important evidence of the overall nature of children's experiences.

The ECCO has three global subscales:

- The Staff-Child Interaction subscale focused on how staff interacted with children, how staff managed behavior, and how values were inherent in their ways of interaction.
- The Curriculum subscale examined how the classroom day was organized, the quantity and nature of materials available, developmental areas that the classroom supported, and values inherent in the curriculum.
- The Physical Environment subscale focused on the overall organization of the physical environment and on nutrition and meal times.

As shown in Table I, classroom observation data provide overwhelming evidence that Step by Step initial and expansion classrooms more often function in ways consistent with democratic values than do traditional classrooms. For each subscale, statistical tests revealed no significant difference between initial and expansion classrooms, and highly significant differences when initial and expansion classrooms were compared with traditional settings. Not only did initial and expansion classrooms display more highly-valued democratic practices than did traditional classrooms, but the overall level of performance was also impressive. The mean subscale scores of 2.61 out of a possible 3.00 for *Staff-Child Interaction* and 2.60 for *Curriculum* reflected average ratings that fall between “partially met” and “fully met” across all items. Additionally, the mean score of 2.90 for initial classrooms on the *Physical Environment* subscale was

very high, indicating that most classrooms fully met the requirement of each item in this subscale. Expansion classrooms also rated well on this scale (2.73), far higher than the traditional classrooms (1.60). Thus, the overall picture provided by the classroom observational data is that initial and expansion Step by Step kindergartens offer high-quality, developmentally appropriate experiences for children.

Table I: ECCO Subscales

| Subscale | Step by Step | | | Expansion | | | Traditional | | | Signif. |
|--------------------------------|--------------|-----|----|-----------|-----|----|-------------|-----|----|---------|
| | M | SD | n | M | SD | n | M | SD | n | |
| <i>Staff-Child Interaction</i> | 2.71 | .44 | 40 | 2.61 | .31 | 40 | 2.10 | .44 | 40 | .0001 |
| <i>Curriculum</i> | 2.70 | .23 | 40 | 2.60 | .32 | 40 | 2.00 | .33 | 40 | .0001 |
| <i>Physical Environment</i> | 2.90 | .31 | 39 | 2.73 | .45 | 40 | 1.60 | .59 | 40 | .0001 |

Question 3: How Do Step by Step Teachers and Teachers in Traditional Classrooms Differ with Respect to Their Approach to Teaching?

Our findings revealed dramatic differences between teachers in Step by Step and those in traditional programs. Step by Step teachers, more than their counterparts, consistently encouraged children’s initiative and questioning. Therefore, it is not surprising that Step by Step teachers, unlike traditional teachers, are more comfortable with children’s inquiry. In other words, Step by Step teachers do not feel that they must know “the right answer” before they allow children to experiment and explore. Instead they have made the shift from *teacher as expert* to *teacher as learner and facilitator*—an important transition for teachers carrying out a child-centered curriculum. The predictability of the scope and content of the traditional curriculum provides a measure of security: questions are anticipated; right answers are available; and being right is valued. With child-centered practice, teachers must see themselves as learners who are experts in knowing *how* to find out. In this way, teachers are modeling important notions: curiosity is valued; exploration brings new knowledge; and learning is lifelong.

Our data confirmed that these differences in behavior are undergirded by a significantly different system of beliefs. As measured by a beliefs and practices instrument, Step by Step teachers appear to share a system of beliefs about child development, children's active learning capacity, and those teaching strategies that optimally promotes child development and learning. While there was virtually no difference between the means for Step by Step teachers in initial versus expansion classrooms, differences between Step by Step and traditional classrooms were highly significant ($p < .0001$).

Step by Step teachers shared the following convictions:

- It is an important goal for young children to learn to make choices as well as to pose their own questions.
- Children learn new ideas best through play and experimenting with materials.
- Children's active learning capacity extends to the intellectual and social domains.
- Children's roles should include involvement in establishing classroom rules, taking responsibility for tasks/jobs in the classroom, and developing skills for solving intellectual and social problems with other children.

Our findings also indicate that the theme of continuous learning extends beyond classroom walls. Step by Step kindergartens have substantially altered their administrative structures so that teachers have time to plan together and learn from one another as well as from their supervisors. They also have more opportunities to attend workshops on topics of their choice. The emphasis on continuous learning in Step by Step programs appears to have acted as a catalyst that has opened up decision making in unanticipated ways. Data from teachers and kindergarten directors underscore that Step by Step teachers have become decision makers not only about curriculum but also about the ways that kindergartens operate. Greater access to decision making and power, characteristic of democratic institutions, seems to be taking hold.

The following quotation from a Step by Step director characterized the overall change in the tone of one kindergarten and is representative of many of the comments made by directors across all four countries:

Before Step by Step, discussions were formal and there was no consideration of suggestions coming from the staff with respect to the decision making process. Before, materials and toys for children were not available to them. Now they are displayed so that everyone can use them whenever they want to. Before, children's work (drawings, collages, etc.) were displayed only for kindergarten teachers. Now they are displayed for children and parents too. Before, parents were not allowed to come in the classroom; they had to leave their children in the entrance hall and did not see what their children were doing. Now the kindergarten promotes a permanent open-door policy.

Our findings also revealed an interesting discrepancy between Step by Step teachers' democratic practices in the classroom and their underlying beliefs about their role. Namely, while teachers actually share power with children in their classrooms, they also retain the belief that teachers should be the primary locus of control. One explanation for this apparent contradiction between behavior and belief may be the lasting impact that early schooling has on teachers' beliefs. Because we know that experiences with early schooling are formative, exposure to Step by Step's participatory classrooms and schools may have an unexpected benefit. Such early experiences can help to create a fundamental and long-lasting commitment to democratic beliefs and practices in this generation of children.

While Step by Step teachers differ from traditional teachers in many respects, they do share one common value. Both Step by Step teachers and teachers in traditional programs hold similar academic goals. That is, teachers in both programs reflect a strong national commitment to developing basic skills in preschool programs. If Step by Step teachers had neglected to meet these goals, the program would quickly become marginalized. But Step by Step teachers retained their country's academic standards, thus improving the likelihood that Step by Step will become one of the major preschool models.

Question 4: To What Extent are Parents, Extended Family, and Community Members Actively Engaged in the Implementation of the Step by Step Program?

Family involvement is, perhaps, Step by Step's most extraordinary achievement. Initially, host countries were skeptical about inviting family members into the

program even in a limited way—as classroom volunteers. Breaking down the well-established boundaries between the roles of parents and teachers involved exploring new and uncharted territory. Yet, these first steps have led to an impressive range of family involvement activities and the welcomed presence of parents in Step by Step kindergartens.

The nature and extent of family involvement has been corroborated by all of our key data sources: kindergarten directors reported it; our data collectors observed it; and ministries of education remarked most favorably about its impact.

Step by Step programs revealed their openness to parents in several concrete ways. Some of the most noteworthy findings in this arena are:

- One hundred percent of the Step by Step programs have active parent associations which contribute to the governance of the kindergartens.
- Family volunteers were observed in 90 percent of the Step by Step classrooms, but in only 20 percent of traditional classrooms.
- More than half of the families assisted with kindergarten maintenance (58 percent), constructed equipment and materials (53 percent), and donated cash (52 percent).
- In every Step by Step kindergarten, parent rooms were available; no such space existed in traditional programs.
- Every Step by Step kindergarten director reported that teachers make home visits.
- Every Step by Step kindergarten director reported holding regular meetings with parents, and teachers reported having regular conferences (between quarterly and monthly), significantly more often than in traditional settings.
- Reports were regularly sent to parents (two or more times a month in two countries; between two and six times per year in the other two countries)—a rate only slightly higher than that seen in traditional kindergartens.
- Children’s work was sent home regularly, with this being a somewhat more common practice among Step by Step than traditional kindergartens.

What started as primarily a classroom volunteer initiative has evolved into a way of working that values the diverse contributions from family members and the community as well. Community members were reported to participate as classroom volunteers in 70 percent of the kindergartens. Community members

also provide a range of in-kind contributions. For example, 95 percent of the Step by Step kindergartens have been repaired and maintained by community members.

It is clear that families and community members have contributed extensively to Step by Step kindergartens; there is also reason to believe they have been enriched by their participation. Kindergartens—with their access, openness, and shared decision making—have created a climate which influences the many volunteers who cross their thresholds. These adults, interested in the well-being of their children, grandchildren, and neighbors are engaging with democratic practices in dynamic and concrete ways.

Question 5: What is The Potential for Step by Step Schools to Become Centers for Staging Broader Community-based Activities Such as Elder Care, Health Care, Adult Education, or Distribution Centers for Goods and Services?

Tackling broad social issues requires that Step by Step families and kindergarten staff alike have a deep understanding of the social, economic, and health needs within their communities. Interviews with kindergarten directors revealed their keen awareness of broader social concerns.

As shown in Table II, kindergarten directors identified six distinct areas of need. Of these six categories, four were mentioned by at least 60 percent of the directors as priorities—health services, services to the elderly, goods and services for low-income families, and adult education. This breadth of vision suggests some sophistication in their understanding of their communities. Further, key social indicators corroborate their insights. For example, every kindergarten director identified health services as the most critical need in their community. Such health needs are clear, especially when examining the rates of infant mortality (per 1,000) in Bulgaria 12.7; Kyrgyzstan 38; Romania 22; and Ukraine 24.¹

¹ UNICEF (1998). *State of the World's Children 1999: Education* [Statistical report]. Retrieved January 25, 1999 from the World Wide Web: <http://www.unicef.org>

**Table II: Critical Needs for Community Service
Identified by Kindergartens**

| | Bulgaria | Kyrgyzstan | Romania | Ukraine | Total | |
|--|-----------------|-------------------|----------------|----------------|-----------------|--|
| | # Yes n = 5 | # Yes n = 5 | # Yes n = 5 | # Yes n = 5 | # Yes n = 20 | % Directors Indicating Services Needed |
| Health Services | 3 | 5 | 4 | 4 | 16 | 80 |
| Services to the Elderly | 1 | 5 | 5 | 4 | 15 | 75 |
| Goods and Services for Low-Income Families | 3 | 5 | 5 | 2 | 15 | 75 |
| Adult Education | 2 | 5 | 4 | 2 | 13 | 65 |
| Services to People with Disabilities | 0 | 5 | 4 | 3 | 12 | 60 |
| Workforce Development | 1 | 2 | 2 | 0 | 5 | 25 |

Kindergarten directors repeatedly expressed a willingness to address these issues by serving as a hub for community-wide programs. However, lack of resources was cited as the major obstacle.

While many programs are exploring possible solutions to community problems, others have already initiated activities to address the complex social, educational, and economic needs of their communities. Kindergarten directors reported that programs are engaged in a range of community efforts—from donating goods to families in need to organizing health clinics for neighborhood residents. Further, we found evidence of emerging entrepreneurial skills among kindergarten directors that could be used to stage initiatives that respond to the comprehensive needs of children, families, and communities.

Question 6: To What Extent Can the Interests and Energies of Engaged Parents Also Be Directed Towards Other Community Development Initiatives?

As noted earlier, families play an active role in Step by Step. This role has led parents to advocate on behalf of the program to town officials, members of local education authorities, business leaders, and occasionally ministries of education. Data from kindergarten directors revealed that family advocacy focused on issues

directly related to children and their education. For example, families in 17 of the 20 kindergartens advocated for increasing Step by Step enrollment. Twelve kindergartens reported family advocacy efforts to expand the program into primary schools; and in eleven kindergartens, families advocated for additional financial support for the program. Families have also advocated for other issues such as space and licensing.

Such advocacy is not surprising since it is the kindergarten that has been the galvanizing force around which families initially organized. These efforts do suggest, however, that families' energies and efforts could be mobilized to address social problems beyond Step by Step. In fact, kindergarten directors indicated families are already contributing to wider community efforts by donating goods, and organizing health and education programs for community residents.

These reports from kindergarten directors clearly suggest that families are gaining experience and skills that would enable them to address broader community issues. Furthermore, Step by Step kindergarten directors reported that with additional resources, the program can provide both the impetus and support to carry out such community development initiatives.

Question 7: Can the Step by Step Program Become Sustainable (Economically and in Practice)?

The sustainability of the Step by Step program has been demonstrated in many ways. One mark of sustainability is that the level of child achievement is at least as high as the achievement of children in traditional programs and its positive impact on children and families has been retained, even with rapid program expansion. Furthermore, there is increasing demand for the extension of the types of services offered and expansion in the number of kindergartens.

Step by Step has also made considerable progress in developing its institutional capacity, as indicated by the attainment of Non-Governmental Organization (NGO) status in three of the four countries. By attaining NGO status, programs

are gaining independence from the regional foundations by diversifying their funding base and developing financial management practices. The strength of the Step by Step's organizational infrastructure is also evident in the Model Training Sites (MTS), a network that both supports and disseminates Step by Step methodology. In just a 10-month time period, MTSs trained more than 3,000 teachers and administrators and reached more than 2,000 parents.

The extent to which education systems adopt and promote Step by Step is key to the future viability of the program. One of the guiding principles of Step by Step is that it supplements but does not supplant government funding. Therefore, Step by Step requires active government support to succeed. The most important government partner for Step by Step is the national ministry of education, an institution that is not only responsible for accrediting programs but also for charting the course for education reform. The ministry also regulates the certification of teachers and their in-service training.

Our findings indicate that ministries of education in all four countries have a deep understanding and appreciation of Step by Step. They have also provided Step by Step programs with substantial support in a number of ways. Ministries have provided programs with direct and/or in-kind contributions; they have also provided policy support, including permissions, waivers, and contracts that are necessary to enable the program to operate smoothly. Perhaps the most significant way ministries have supported Step by Step programs is by granting them official status. Such recognition indicates the ministry's official acceptance of the program as a viable, alternative educational approach. At the same time, it also opens doors for programs, providing them with the independence and resources they need to broaden the scope of their services. As noted earlier, three of the four countries in our study have been granted such status.

Ministries of education also have begun to take an active role in advocating for and promoting the program. For instance, ministry representatives meet regularly with Step by Step country team members to plan expansion efforts; they also connect interested teachers and administrators with the program. Similarly,

ministry representatives at the national and local levels have disseminated information about the program by talking about Step by Step on the radio and television, writing papers to promote the approach, and organizing roundtable discussions.

Institutions of higher education have also integrated Step by Step methodology into their ongoing work. As a result, large numbers of student teachers are placed in Step by Step classrooms, new higher education courses about Step by Step methodology have been introduced, and, in some cases, these new courses of study lead to certification in Step by Step pedagogy. Taken together, this constellation of factors strongly suggests the program's ability to become sustainable.

What is evident is that the program appears to have avoided many of the common problems that accompany an innovation that goes to scale. The quality of the program has been retained, even with its rapid expansion. Implementation has encountered little of the resistance one might expect from key institutions. In fact, Step by Step programs have enlisted the active support of the government as well as institutions of higher education. While there is expected variation among the four countries in our sample, it is clear that even after a brief four-year period, Step by Step is steadily being woven into the fabric of their unique educational systems.

Much of the program's success in developing a sustainable model can be attributed to two factors. First, the model was designed to engage a host of individuals in the decision-making process. Parents, ministries of education, leaders in teacher education, country teams, and kindergarten staff have not only helped to shape the program's current implementation—they are also well-poised to craft its future.

Second, the content of the program itself—education for democracy and learning—has struck a chord with the social forces at play. In these newly independent states, many policy makers, families, and educators are committed to building a democratic society. The social momentum initiated at the beginning of

the decade appears to have found an outlet, as well as guidance, in Step by Step. Just as social energies and commitments have enriched Step by Step—the program, in turn, has strengthened the capacity of society to reach its goals.

