

Active Learning and Democratic Behavior in Guatemalan Rural Primary Schools [1]

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ABSTRACT *Emerging democracies such as Guatemala are beginning to experiment with active learning methodologies to improve learning and encourage democratic behavior among children. However, there exists little information on the effects of different classroom environments on children's behavior in developing countries. This study uses focused classroom observations to examine differences in the democratic behavior of children of different genders and ethnicity attending traditional rural schools and those attending rural schools with an experimental active learning program. Results show that children in the experimental program engage in significantly more democratic behaviors than their counterparts and these behaviors are related to participation in small group activities. Within the active learning program, greater democratic behavior and small group participation are also related to higher reading achievement at the classroom level.*

Introduction

There is a growing concern with improving educational quality in primary schools among Latin American educators. Over the last three decades, Latin American countries have made great progress in providing children access to schooling. Primary school enrollment has increased from 60% of school-aged children in 1960 to over 90% in 1990. However, only about half of the children in the region complete sixth grade and only 21% never repeat a grade. The reasons for such inefficiency have generally been attributed to the poor quality of schooling, especially in rural areas where poorly trained, underpaid teachers in ill-equipped, overcrowded classrooms teach largely through rote memorization. Educational reformers are turning increasingly to active learning methodologies in the hope of improving quality. This is especially true in countries such as Guatemala, which has recently terminated decades of armed internal conflict. Active learning approaches in Guatemala (MINEDUC, 1996), Nicaragua (MED, 1997) and El Salvador (Deweese *et al.*, 1995) are seen not only as helping children to take part in their own learning, but as contributing to democratic behavior through participatory activities.

The *Nueva Escuela Unitaria* (NEU) has been one effort by the Guatemalan government to improve educational quality for rural children. In the 'New Unitary School' program, Guatemalan educators adapted the *Escuela Nueva* model of Colombia to the

needs of Guatemala through pilot programs in indigenous and non-indigenous regions. The program began during a period of unrest in Guatemala, as a decades-old civil war that had cost the lives of an estimated 100,000 Mayans in areas of conflict between the Guatemalan army and guerrilla forces was drawing to a close. In addition, although two presidential elections had taken place, after 40 years of dictatorships, the elected president attempted a 'self-coup' (*auto-golpe*) in 1993, similar to that which occurred several years earlier in Peru. Negative international and internal reaction led to the president fleeing the country and the appointment of an interim government. This government began serious negotiations with guerrilla forces. Two years later, power changed hands through the election process and the new government was able to negotiate a peace agreement with guerrilla forces in 1996. The most far-reaching commitments in the peace agreement were those that recognized Guatemala as a pluri-cultural, multilingual country and that assured indigenous communities an expanded role in decisions affecting their lives. Closely related to this was the commitment to decentralize government and create local control over government services.

Throughout the negotiation period, the role of education in consolidating the peace process was discussed. This role was defined in the agreements as creating a 'culture of peace' which included learning to participate with others to make decisions and valuing cultural and linguistic differences (Comisión Paritaria de Reforma Educativa, 1998).

The NEU program is one educational approach to meeting the peace agreement goals of increased participation and decentralization of decision-making. It provides a 'package' of activities that encourage collaboration among and between students, teachers, and parents. This package involves: a series of three one- to two-week in-service training workshops for teachers at which they reflect on their own experience as students and teachers, develop the materials to be used by students, and form 'teachers' circles' that meet regularly to help one another with issues in implementing the program; parent involvement activities such as participation in classroom activities as resources for local customs and agricultural pursuits, and as members of the school governing boards; and a series of active learning strategies such as the use of self-instructional guides, learning corners, small group work and peer teaching, as well as flexible promotion and participation in elected school government. The NEU program stresses the role of the teacher as a facilitator who encourages children to be active, creative, participative and responsible through collaboration in small groups and individual use of a variety of learning contexts. Such learning experiences are seen to lead to both the construction of knowledge through social interaction (MINEDUC, 1996) and democratic attitudes and behaviors such as comradeship, co-operation, solidarity and participation (Colbert *et al.*, 1990).

The idea of a decentralized, active learning environment leading to democratic behaviors is not new. John Dewey (1966) conceptualized a democratic learning environment as one in which learning occurs when student activity is carried out in a social context that engages individual students in group activities building toward a common purpose, and where teachers facilitate participation of all students. Much of the effort to examine the relationship of classroom climate to democratic behavior has focused on the experience of students in different types of classrooms in the USA and other industrialized countries. Researchers have studied students' perceptions of classroom rules and norms (Ehman, 1969), children's strategies for conflict resolution after participating in authoritarian and open classrooms (Fry & Addington, 1984), and the relationship of civic interest to freedom of expression allowed in class (Torney *et al.*, 1975; Ehman, 1980). Recent studies have compared the content and structure of civics education in different

countries as it relates to students' disposition for political participation (Hahn, 1998) and examined the way in which learning contexts facilitate assimilation or restructuring of new information about students' political world (Torney-Purta, 1989; Haste & Torney-Purta, 1992). While national political environment can influence student dispositions, these studies generally found that students in the more participatory and interactive classrooms exhibited more democratic dispositions.

Participation in school decision-making is another aspect of school climate that is seen as fostering civic behavior. Findings of studies that have investigated experiments with Kohlberg's (1975) Just Community model have suggested that encouraging students to take part in student governments that work co-operatively leads to empathy and caring for the group (Kohlberg *et al.*, 1981; Murphy, 1988).

Observational research on classroom interactions also supports the influence of classroom climate or structure on democratic behaviors. Much of this research follows a social constructivist perspective based largely on the theories of Vygotsky (1978). This perspective focuses on the ways in which learners generate understanding through social interaction. Thus, such learning is intimately connected to the situation in which it occurs (Resnick, 1987, 1989; Newman *et al.*, 1989). Nelson-Le Gall (1992), in an extensive review of children's help-seeking behavior and in her own work (Nelson-Le Gall & DeCooke, 1987), has found that peer help-seeking is more likely to occur in small co-operative learning groups than in whole-class or individual seatwork activities. Hertz-Lazarowitz and her colleagues, working in cultural contexts such as kibbutzim and city schools in Israel (Hertz-Lazarowitz *et al.*, 1989) and bilingual primary schools in Texas (Calderón *et al.*, 1990), have shown that when teachers used instructional strategies involving active learning, greater student co-operation and helping behavior occurred.

These studies argue persuasively for a link between active, decentralized classroom environments and democratic behavior of students. They have, however, been largely limited to schools in countries that have a fairly long tradition of democracy. Also, they seldom deal with schools serving populations of the rural hinterlands. This study examines the relationship of an active learning environment to the democratic behavior of young rural children from different cultural backgrounds in Guatemala, an emerging democracy of the Third World.

Method

Sample

The study used the existing database of the Improving Educational Quality (IEQ) project, which carried out a multi-year examination of the *Nueva Escuela Unitaria* program. The sample consisted of 220 children who began first and second grade in 1993, the first year of full implementation of the NEU program, and who remained in school through 1994. The children were located in ten schools implementing the experimental program and in ten comparison schools or *escuelas unitarias* (EU). Twelve children from each of the 20 sample schools were selected for intensive observation. Six children were first graders and six were second graders. This was about one-third of the children in each grade. Dropouts were replaced in the observational sample at the beginning of the school year but not throughout the year. Thus, the final sample consisted of 116 children in NEU schools and 104 in the EU comparison schools.

The experimental schools formed a 10% sample of NEU program being implemented

in two regions of Guatemala, one with a predominantly indigenous population and the other with a non-indigenous, or *ladino* population. The comparison group schools were chosen for their similarity to the NEU schools in terms of number of students, distance from a municipal center, number of teachers, ethnicity of students, and absence of other experimental educational programs.

Procedures

Focused observations were made of the children at the beginning and end of 1993 and three times during 1994. The principal data collection technique was that of participant observation where a researcher took extensive written field notes on the behavior of each child in the sample. Data collection combined the strategies of time and event sampling, as each child was observed in specific academic subjects (Spanish Language Arts and Mathematics) for periods of 5–10 minutes at various times during a lesson over different days of the week until a total of one hour of observation of Spanish Language and Mathematics classes combined had been completed at each observation period. This created a corpus of 60 hours of observations of individual children and approximately 1500 interactions per sample school or 30,000 interactions in total. As Spanish language and Mathematics classes each lasted about 45 minutes a day and the official school year was 180 days, there were 570 hours of instruction in the two subjects during the two-year study. Thus, the observational data are a representative sample of slightly more than 10% of all instructional time.

Observations of individual children were coded for instructional context (small group with teacher, small group without teacher, large group, seatwork), and for certain democratic behaviors. The IEQ team took dimensions from a survey of democratic behavior among Guatemala adults (USAID, 1994) that could be adapted to the behavior of young children in school settings and created observable indicators of these dimensions. The dimensions and indicators were: *egalitarian beliefs*—takes turns and assists other students in an activity; *interpersonal effectiveness*—expresses opinions or attitudes to peers and adults and chooses among viable options; and *leadership/involvement*—directs fellow students in an activity and participates in student government.

Using the codes, the relative frequency of instructional contexts in which individual children participated and the frequency of each type of democratic behavior were calculated. Chi-square analysis was used to make comparisons between experimental and comparison children by region and gender for each behavior. Rank order correlations were computed to examine the relationship between instructional context and the various democratic behavior indicators at the classroom level.

Research Setting

At the time of the study, 100 unitary schools, defined in Guatemala as schools containing one or two teachers who provide instruction to children in multiple grades, were developing the NEU innovation on a pilot basis. It was envisioned that the program would expand to all 600 unitary schools in the two pilot regions and eventually to all of the more than 3000 unitary schools in Guatemala. The schools in the sample were at some distance from a municipal center. They were generally accessible only with four-wheel drive vehicles and often required a walk of several hours to the school from the last accessible point for a motorized vehicle. Schools generally consisted of one or

two large rooms and a small office or storage area. Because of difficulty in access, furniture was old and dilapidated. None of the schools had electricity or potable water.

Most teachers arrived by bus or truck from the nearest municipal center, often leaving their homes at 5 a.m. in order to arrive at a school by 8 o'clock. The school day generally ran from 8 a.m. until 1 p.m., with a 45-minute recreation period. One or two teachers worked with children between the ages of six and 16, distributed in four to six grades of primary school.

Children walked to school from dispersed communities. The principal livelihood of the communities was subsistence farming, supplemented by seasonal migration to pick crops such as coffee and cardamom. On the average, parents had less than four years of schooling, with Mayan-speaking parents averaging about one year of formal education.

Results

Instructional Contexts

As a focus of the study was the degree to which the NEU program altered the traditional classroom environment to promote student participation, tabulations were made of individual children's interactions in different classroom learning environments. These individual totals were then aggregated at the school and classroom level. Table I presents the relative frequencies with which children in NEU schools and traditional schools, respectively, participated in different instructional contexts. As might be expected, children attending NEU schools in both the indigenous region (Region II) and the non-indigenous region (Region IV), spent considerably more time in small group contexts during lessons than did children in traditional multi-grade schools. Indigenous children as a group were in small groups in over 50% of all observations, while *Ladino* children were in small group learning contexts in 40% and 38% of all observations in 1993 and 1994, respectively.

Small group work ranged between an average of 22% of lessons to a high of 58% in

TABLE I. Percentage of time spent by sample children in different learning contexts

NEU	Region II			
	Small group teacher (%)	Small group w/o teacher (%)	Large group (%)	Seatwork (%)
1993	34*	19	11	35
1994	12	43	5	40
EU				
1993	5	1	31	62
1994	1	2	10	86
	Region IV			
NEU				
1993	22	18	14	46
1994	10	28	10	52
EU				
1993	6	1	25	68
1994	8	2	17	72

* Percentages may not total 100% owing to children being observed during transition periods.

the ten NEU schools. In traditional schools, the maximum observed average participation in small groups was 18% of lessons. In several EU schools, this type of learning context accounted for less than 2% of students' lessons.

During the first year of the study, when NEU children were in first and second grade, they participated in relatively more teacher-directed small groups than student-directed small groups. This is understandable, as children were developing basic letter and word recognition skills, especially indigenous children who came to school with little knowledge of Spanish. When the children advanced to second and third grade in the second year of the study, they were better able to use the self-instructional guides developed by the NEU program. Thus, a greater percentage of participation in student-led small groups was observed.

In traditional schools, small groups were the context for less than 10% of the children's interactions. During both years, seatwork predominated in the *escuelas unitarias*. There was, however, a rise in seatwork and a decrease of teacher-directed large groupwork in schools of both regions. Again, perhaps reflecting teachers' tendency to allow children to work on their own as they advanced in grade.

Democratic Behaviors

To examine the relationship of participation in the active learning environment to democratic behaviors, the occurrence of each indicator with individual children was tabulated. Chi-square analysis was then used to make overall comparisons between groups as well as comparisons by region and gender.

Table II shows the comparisons by gender and region for behaviors observed occurring with sufficient frequency to be analyzed each year of the study. As can be seen, the majority of observed instances of turn-taking occurred among NEU children. For the total sample, over 80% of all observed turn-taking behavior in 1993 and 89% of such behavior in 1994 took place in NEU schools. The patterns were similar for both

TABLE II. Observed democratic behaviors of NEU children as a percentage of all democratic behaviors

Behavior	Region II			
	Boys		Girls	
	1993 (%)	1994 (%)	1993 (%)	1994 (%)
Turn-taking	74	75	71	91**
Assisting others	100	61	50	46
Expressing opinions	—	69	—	51
Directing others	81*	87**	60	84**
Behavior	Region IV			
	1993	1994	1993	1994
	1993	1994	1993	1994
Turn-taking	88	100**	100	100
Assisting others	100	66	66	75
Expressing opinions	—	43	—	61
Directing others	85*	100**	69	100

* $P \leq 0.05$

** $P \leq 0.01$

indigenous and non-indigenous children, with at least 70% of observed turn-taking in a given year taking place among NEU children.

Much of the turn-taking behavior observed in the NEU program occurred in student-directed small group learning contexts. As mentioned, the frequency of these contexts increased in 1994, as children advanced in grade level and spent more time working collaboratively with the NEU self-instructional guides. Such increased opportunity for student-directed interaction may account for the general increase in observed instances of turn-taking in the second year of the study. The following two examples typify the behaviors observed in the NEU program. Pseudonyms for students and schools are used throughout the text.

Flor, a third grader at Carrillo, is sitting with one other girl working with the guide '*Palabras bien acentuadas, ideas bien comunicadas*' (Well-expressed words, well-communicated ideas). Flor listens as Carmen reads. When Carmen finishes reading, she says to Flor, 'Now it's your turn to read' (*Ahora a usted le toca leer*). Flor reads quietly so that she almost cannot be heard. Her classmate is distracted and doesn't listen well. Flor continues reading for about one minute. Then she finishes reading and hands the guide to Carmen. She begins to read, but cannot find the place where Flor left off. Flor tells her, 'No, you're not reading the right part' (*No, allí donde está leyendo no es*). Carmen asks her where she should read, and Flor points to the right place. Carmen begins reading and Flor listens quietly.

Eduardo, a third grader at Samilaha, is looking up definitions in a dictionary with a small group of boys. He and Ricardo begin to copy the definition of the word 'tomato'. Eduardo listens as Ricardo reads the definition and begins to write it down, 'Tomato: a red, edible fruit ...' (*Tomate: una fruta comestible de color rojo*). Eduardo finishes copying the definition and says to his classmate, 'What's the next one?' (*Ahora qué toca, vos?*) Ricardo answers, 'Wheat, Eduardo' (*Trigo, vos, Eduardo*). Eduardo and his classmate begin searching for the word. After a minute, his classmate finds the word and says, 'Here it is' (*Aquí está, vos*). Eduardo says, 'Where? Oh, yes' (*Dónde? Aaa, sí pues*), and underlines the word. Eduardo reads the definition out loud as he and Ricardo copy it.

The infrequent observed incidences of turn-taking in traditional schools were generally of a different type. They involved waiting in line to have the teacher review one's work, with the teacher calling children one by one. Contrary to the participatory nature of the turn-taking and collaborative work negotiated among the NEU children, almost all turn-taking among EU children was directed by the teacher.

David is a first grader in the EU school, Aguazal. He finishes copying numbers from the board into his notebook, then joins the line of three children at the teacher's desk. He shoves his notebook in front of the teacher who says 'Wait!' (*Espera!*). The teacher finishes with the notebook he is correcting, hands it to one of David's classmates and takes that of David.

During the first year of the study, only ten instances of assisting others in their academic work were observed among first and second graders. This may have a result of the sample children's limited experience with academic content at that stage of their schooling. The general trend favored NEU children as seven of the ten instances took place with them. In 1994, over 100 instances of this behavior were observed. The general

trend favored NEU children, as 59% of the overall occurrences (60% of the occurrences among boys and 57% of the occurrences among girls) involved NEU children. However, as shown in Table II, there is variation among the sample, as indigenous girls in NEU schools accounted for 46% of the observed instances of this behavior compared to 54% of the behavior among indigenous girls in traditional schools.

In NEU, the observed instances of assisting others generally involved a student explaining something, such as instructions for an assignment or the operations necessary to resolve a problem, to a classmate. In traditional schools, assistance often meant that a child completed an assignment for another student, rather than helping the student to learn how to do it him/herself. The following examples illustrate these differences.

Marta, a second grader at EU Lazaro, is sharpening her pencil when a first grader calls her over to her group. Marta sits down with the four younger girls. One of the girls hands a book, '*Mi pequeño tesoro*' (My little treasure) to Marta, and she copies a lesson from the book into the girl's notebook.

Maite, a third grader at NEU Mariscal, works with a small group on natural sciences. Maite asks her classmate how many questions she has left to answer. Firoy responds, 'I haven't copied any yet.' 'I'll dictate to you then,' Maite tells her. She begins to read out loud and her classmates listens, 'What would happen if these creatures were taken to live in another place?' (*Qué pasaría si se llevarían a esos seres a vivir a otro lugar?*) Maite observes Firoy as she writes and says, '“Llevaría” is spelled with “ll” like “pollo”' (*Llevaría (take) es con la ll de pollo* (chicken)).

The indicators for interpersonal effectiveness were intended to show children's opportunities to develop solutions and articulate reasons for their solutions. However, during the study, only two incidences of children choosing among viable options were observed. This suggests that choosing among viable options may require greater attention by teachers to presenting children with situations that allow appropriate choices. It may also reflect that second and third graders have not yet reached a developmental level where they can choose among alternatives. It is important to note that the children participated successfully in choosing among candidates for student government. Such elections, however, occurred outside the observation periods.

In contrast to 1993, where no observations of children expressing opinions or attitudes about school content or social norms were recorded, in 1994, a total of 111 instances of children expressing opinions were observed. A majority of these instances (59%) occurred in NEU schools, with 62% taking place among NEU boys and 55% occurring among NEU girls. As shown in Table II, results were not consistent across all groups, as less than half of the incidents of expressing opinions among non-indigenous boys involved NEU students.

Many of the observed behaviors of expressing opinions are related to students questioning classroom procedures. The following example of Juan, a second grader at the NEU school Chirrepi in Alta Verapaz, illustrates this behavior.

The children are working individually, copying geometric figures from the blackboard. Juan says to himself in Mayan, 'I'm not going to copy these drawings just to waste a page in my notebook.' He gets up and walks around the class. The teacher, in Spanish, tells him, 'Work, please.' Juan responds in Mayan, 'But, teacher, we did this last year.' The teacher responds in Mayan, 'Yes, but now we are going to copy it again.' Juan replies in Mayan, 'But I don't have my drawing notebook', and the teacher responds in the same language, 'Put it in your letters notebook.'

The behavior of directing others occurred in instances in which children provided instructions to their peers on how to deal with academic content or norms. As shown in Table II, the small group work encouraged by the NEU program appeared to promote this behavior. Significantly greater incidents of directing peers were found among NEU children than among children in EU schools. This was especially true in the second year of the study, where overall, 89% of the observed occurrences of directing others occurred among NEU children. As might be expected, the great majority (over 75%) of these behaviors in each region took place in student-directed small groups.

Much of the opportunity to lead or direct others was provided by the NEU program, through the use of 'monitors'. These children often directed small groups or served as models for the exercises provided by the self-instructional guides. The two examples illustrate this type of situation.

Florencia is a third grader at NEU Carrillo. She is in Spanish language class working with a small group. She says to her classmates in the group, 'I'm going to dictate to you' (*Les voy a dictar*). The other students open their notebooks, and she says, 'Write "Stories have three very important parts"' (*Escriban 'Los cuentos tienen tres partes muy importantes'*). She repeats this three times, then continues, 'Now, two little dots. Look' (*Son dos puntitos. Miren*), and she writes a colon on her hand. She continues dictating to the group.

Carlos, a second year student at NEU Pantanal, is in Spanish language class. He is serving as the monitor in a group with three other children. The teacher has told them to write ten words with the letter 'd' and frequently checks on their progress. After several minutes of writing words on each other's backs, Carlos says, 'Now we have to write in the air' (*Bueno, ahora nos falta en el aire*). He calls on a classmate, 'Sonia, come up and write "dama"' (*Sonia, pase usted y escriba 'dama'*). She writes 'dado' in the air and all of the students in the group say, 'No. Erase it and write "dama"' (*No. Borra y escribe otra vez 'dama'*). She writes it correctly and Carlos tells her, 'That's right' (*Eso. Así es*).

Another typical directing behavior observed in NEU schools, was one student telling another how to perform a task or interpreting instructions for him/her. This was especially common in the indigenous region as shown in the following example from NEU Secuchil.

Mercedes, a third grader, is copying words from the dictionary with three classmates. She pauses and asks Edgar, ' "Uniliaria, uniliaria"?' Edgar points to the word, smiles, and tells her in Mayan, 'You have to write "unitaria"'. It's not right there'. Mercedes corrects her paper and copies 'My name is: Ana Cucul.' Edgar watches her and says, 'There you have to write your name. Look' (*Allí tenes que escribir tu nombre. Mira*), and he shows her where to substitute her name for the name in the book.

Directions provided in the traditional schools were of a different type. They were largely commands about individual behavior of children involved in a particular interaction and were rarely related to academic content or classroom social norms.

In mathematics class at EU Barrial, Nestor, a third grader, is copying problems

for a test from the blackboard. Ricardo, another third grader, sits down and asks, 'Are you almost done copying the problems?' (*Ya vas a terminar de copiar las preguntas?*). Nestor asks, 'Why?' (*Porqué?*). The other boy tells him, 'So that you can go sit someplace else so you don't copy my test' (*Para que vayas a sentar a otro lado. Si no, me vas a copiar de mi examen*). Nestor replies, 'You go sit somewhere else because I'm staying here' (*Vos andáte a otro lugar porque yo me voy a quedar aquí*). The boy answers, 'Okay, then.' He leaves while Nestor continues copying the problems.

Participation in student government was the final behavior analyzed. As mentioned, the research focused on children in the first three grades of primary school in the context of academic lessons. Thus, little participation in school government, which normally takes place outside of lessons, would be expected to be observed. This, in fact, was the case, with only 19 instances of a child participating in student government activities being observed over two years. It is important to note, however, that all such instances occurred with children in NEU schools as opposed to comparison schools.

Democratic behaviors were observed with over 80% of the children participating in the NEU program. This compared to only about 50% of the children in traditional schools. The frequency of occurrence was about one observation of democratic behavior for every two hours of observation of individual NEU children. In traditional schools, democratic behavior occurred approximately once in every five hours of observation.

Democratic Behavior and Instructional Contexts

To examine the relationship between classroom environment and frequency of democratic behavior, the use of small groups for an entire sample within a school was correlated with total occurrences of the democratic behaviors (takes turns, assists others, expresses opinions, chooses among options, directs fellow students, participates in student government) studied in each school. Table III shows that for NEU schools, the overall use of small groups, as measured by individual children's participation in these learning contexts, and the use of student-led small groups, are significantly related to democratic behavior. Similar relationships are found for girls, boys and the sample as a whole. Use of teacher-directed small groups, on the other hand, is not significantly correlated with democratic behaviors.

In EU schools no significant relationships were found between use of small group learning contexts and democratic behavior. There is, however, some indication that even minimal small group participation may promote democratic behavior, at least among girls. Despite the generally low use of small groups in traditional schools, there are fairly high positive correlations between overall small group usage and use of student-led small groups and the occurrence of democratic behaviors with girls. The correlation coefficients are not, however, significant.

Traditional learning contexts of the teacher working with the whole class in a lecture-type situation and individual seatwork did not have significant correlations with democratic behaviors for either boys or girls in EU schools. Participation in large groups also did not correlate significantly with democratic behaviors in NEU schools. However, unlike EU schools, individual seatwork had significant negative correlations with the frequency of both girls' (-0.73 , $p \leq 0.01$) and boys' (-0.93 , $p \leq 0.001$) democratic behaviors in NEU schools.

TABLE III. Rank order correlations of school level small group use with democratic behaviors

Overall	NEU schools	EU Schools
Total usage of small groups	0.86**	0.34
Usage of teacher-directed small groups	0.52	0.22
Usage of student-directed small groups	0.77**	0.38
Girls		
Total usage of small groups	0.77**	0.53
Usage of teacher-directed small groups	0.49	0.37
Usage of student-directed small groups	0.67*	0.55
Boys		
Total usage of small groups	0.76*	0.01
Usage of teacher-directed small groups	0.52	- 0.02
Usage of student-directed small groups	0.65*	0.07

* $P \leq 0.05$ ** $P \leq 0.01$

Democratic Behavior, Instructional Contexts, and Reading Achievement

Children were tested after the second year in the program. Spanish reading ability was measured using the Inter Americana series Level 1 Form A, which consists of two parts: vocabulary and comprehension. Given the small sample size, the test scores for all sample children were combined to provide an average school score, which was then compared to the composite observed behavior of the children by school. Although there were no significant differences in the mean scores of NEU and comparison children as a group, Table IV shows the within-group differences when reading achievement is related to observed behavior. Within the NEU program, the overall use of democratic behavior is significantly correlated with reading achievement. As might be expected, this is largely a result of providing directions and turn-taking, which also correlated highly with student performance at the school level. The relationship between democratic behavior and reading achievement holds true for both boys and girls in NEU. Similarly, given the relationship between participation in small groups and democratic behavior discussed previously, small group participation correlated highly with reading achievement.

No relationship between any democratic behavior and reading achievement was found for the comparison group. Similarly, participation in small groups did not correlate highly with reading achievement. The traditional learning contexts of seatwork and large groups did not correlate significantly with reading achievement for either group.

Discussion

The results of the study indicate that classroom environment can be an important influence in promoting democratic behaviors among rural students attending schools in

TABLE IV. Rank correlations of school level reading scores with democratic behaviors and small group use

Overall democratic behavior	NEU schools	EU schools
Total usage	0.77**	0.03
Providing directions	0.82**	0.08
Taking turns	0.70*	- 0.18
Helping others	0.32	0.14
Expressing opinions	0.05	- 0.01
Boys' total democratic behavior	0.69*	0.12
Girls' total democratic behavior	0.66*	0.35
Small group usage		
Total usage of small groups	0.79**	0.30
Usage of teacher-directed small groups	0.56	0.30
Usage of student-directed small groups	0.64*	0.12

* P = 0.05

** P = 0.01

somewhat precarious conditions. Participation in student-directed small groups appears to be key to encouraging democratic behaviors. NEU schools with relatively high use of this instructional context also had a greater frequency of democratic behavior among students.

As might be expected, the use of student-led small groups is especially conducive to encouraging behaviors such as turn-taking and directing others. Helping behaviors and expressing opinions occur to a greater degree across a variety of instructional contexts. Several of the hypothesized behaviors (i.e. participation in student government and choosing among viable alternatives) were observed infrequently. This suggests that the opportunity to exhibit them occurs outside of Mathematics and Spanish lessons which were the focus of the study.

The use of student-directed small groups is related to the occurrence of democratic behaviors among children of different cultures and genders. Similar patterns were found when comparisons were made between students in NEU and traditional schools in indigenous and non-indigenous regions. Likewise, consistent trends were found favoring NEU students of both sexes over children of comparison schools in terms of number of democratic behaviors observed. When gender comparisons were made within the NEU sample, no significant differences were found between girls and boys in the frequency of individual democratic behaviors.

Democratic behaviors were not only more frequent in the NEU schools but they were qualitatively different from those observed in comparison schools. In successful NEU classrooms, students used self-instructional guides and other learning materials to solve problems through collaboration and inquiry. In traditional classroom settings, on the other hand, behaviors such as turn-taking or giving directions often occurred at the direction of the teacher or related to classroom performance expected by the teacher.

Promotion of democratic behaviors seems sustainable over time. Relatively consistent patterns were found in the frequency of democratic behaviors in the NEU program when compared to traditional multi-grade schools in both years of the study.

Finally, democratic behaviors seem to be related to student performance, at least at a classroom level in multi-grade schools. This may be a result of the small group learning

contexts that engender the democratic behaviors examined in this study. Greater participation in small groups or relatively greater frequency of democratic behavior in classrooms where active learning approaches are not an explicit part of the program do not appear to promote greater achievement. Small group participation and democratic behaviors alone do not seem to be sufficient to improve overall group achievement, at least in a two-year period. This may be the result of the range in the frequency of such behaviors found in the NEU sample schools.

Implications

Although the results of the study must be regarded as tentative, given that the behaviors investigated are by no means exhaustive and the sample size is limited, they do suggest that democratic behaviors occur among young children in classroom situations and that the frequency of their occurrence can be increased by participation in certain types of classroom environments. For countries wishing to develop democratic behavior in primary school, decentralized classrooms that promote active learning by offering children the opportunity to engage in a variety of learning contexts, especially those of small group student–student interaction, appear essential.

Such participation appears to have an effect on student achievement. This is especially true of behaviors such as group leadership and turn-taking, which are indicative of participatory learning. Given the lack of difference in overall achievement between the NEU children and the comparison group and the range in the frequency of democratic behavior within NEU schools, a certain level of implementation of an active learning program may have to be reached to ensure sufficient contexts for such effects to take place.

However, in countries such as Guatemala, this requires a radical departure from the typical pedagogy of large group lecture and individual seatwork, characterized by the non-experimental schools and the less well-implemented experimental schools in this study. Thus, a substantial investment in teacher in-service training that allows teachers to build knowledge through social interaction, as was carried out in NEU, may be necessary if countries opt to promote democratic behavior of the type described here. The relatively inflexible budgets of most Ministries of Education in developing countries where 70–80% or more is used to pay teachers' salaries, may make a phased approach to program development, such as that being used with the NEU program, the most feasible implementation strategy.

There is a need for a more complete examination of types of democratic behavior and their relationship to children's development and familiarity with the classroom environment. As the study dealt with young children, the bulk of the behaviors investigated here may be at the elementary end of a spectrum of democratic behaviors. As students became more familiar with the classroom or as activities became more cognitively demanding, new strategies such as assisting others were added to the learners' repertoire. This suggests the importance of using a greater repertoire of democratic behaviors to study children over time in a variety of classroom contexts. Studies on the linkage of democratic behavior in the classroom to out-of-school behavior would also be necessary for countries wishing to promote democratic action through school experience.

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