Evaluating School Policy on Parents Working With Their Children in Class
Kyriakides, Leonidas
The Journal of Educational Research; May/Jun 2005; 98, 5; ProQuest Central
pg. 281

Evaluating School Policy on Parents Working With Their Children in Class

LEONIDAS KYRIAKIDES
University of Cyprus

ABSTRACT The author presents findings of an attempt by a primary school in Cyprus to implement a policy on partnerships that encourages parents to work with their children in school. Before the introduction of the school policy, student attainment was similar to that of students at a primary school that did not introduce a partnership policy. Six months after the partnership policy was implemented, students at the experimental school had higher attainment in each core subject. In a value-added analysis of the educational progress of students at the experimental school in each of the 3 core subjects, the author found that all students had improved the quality of their academic work in Greek language, social science, and mathematics, irrespective of socioeconomic background. An examination of parent and student attitudes toward school policy revealed that both groups developed positive attitudes toward the partnership policy. Moreover, parents claimed that their classroom visits contributed significantly to improved teacher communication and to student behavior at home. Implications for development of research and evaluation on partnerships are reported.

Key words: parent involvement, school improvement research, summative program evaluation

The role of parents in education has been a topic of increasing interest. Several research studies conducted in different countries show that involving parents in instructional tasks has positive effects on learning (Campbell & Mandel, 1990; Coleman, 1998; Rosenholtz, 1989; Sanders & Epstein, 1998). Epstein (1992) argued that "students at all levels do better academic work and have more positive school attitudes, higher aspirations and other positive behaviors if they have parents who are aware, knowledgeable, encouraging and involved" (p. 1141). Epstein (1987) showed that teachers who work with parents understand their students better, generate unique, rather than routine, solutions to classroom problems, and reach a shared understanding with parents and students. Moreover, parents who are involved develop a greater appreciation of their role (McBride, 1991). However, Grolnick, Benjet, Kurowski, and Apostoleris (1997) questioned the feasibility of home–school partnerships. They argued that the adoption of such policy is not beneficial for students of lower socioeconomic status (SES) and that the involvement of parents does not diminish the gap in attainment between students of different SES groups (Feuerstein, 2000; Lareau, 1987).

McNeal (2001) claimed that "when reviewing parent involvement studies, one is struck by the high degree of inconsistency between the studies and their relative conclusions" (p. 176). An aspect of much previous research on parent involvement that is particularly troubling is the fact that there are clear inconsistencies surrounding the effect of parent involvement on students' academic achievement. Although the appeal of parent involvement as part of a remedy for school education has been strong in society as a whole (Edwards & Warin, 1999), problematic issues remain in the research. Although empirical studies have shown evidence of positive effects of parent involvement on school learning (e.g., Christenson, Rounds, & Gorney, 1992; Epstein, 1991; Singh et al., 1995), others have found little, if any, such measurable effects (e.g., Keith, Reimers, Fehrmann, Pottebaum, & Aubey, 1986; Natriello & McDill, 1986).

Epstein (1991) raised questions about the presumed positive relationship between involvement and achievement, concluding that gains are higher on some achievement tests, but not on mathematics tests. Epstein claimed that gains in achievement might occur only in subjects in which parents feel confident about their ability to support their children's learning. That argument also was supported by Griffore and Bubolz (1986), but there was no attempt to examine it empirically. The inconsistency in findings linking parent involvement and students' achievement may be attributed to any one of the following reasons: (a) use of measures of teachers' perceptions rather than direct reports by students or parents; (b) failure to fully conceptualize parent involvement by breaking it down into its constituent

Address correspondence to Leonidas Kyriakides, Department of Education, University of Cyprus, Nicosia, Cyprus. (E-mail: kyriakid@ucy.ac.cy)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

parts, including parent–child, parent–parent, and parent–school components; and (c) failure to fully account for the relationship between SES and parent involvement.

Fan and Chen (2001) provided a fourth explanation by arguing that parent involvement research has been fragmented because the empirical research has been conducted without a guiding theoretical framework. Wide variation exists in parent expectations of school and school expectations of parents (Bryans, 1989), as well as a lack of coherence on how parent involvement can be defined (Reynolds, 1992).

However, that disparity appears to be changing because several promising theoretical frameworks for parent involvement have emerged. Epstein (1992) proposed a typology that accounts for different levels of parent involvement in their children's education. Epstein's typology of parent involvement strategies includes five categories:

Type 1: Basic obligations of parents
Type 2: Basic obligations of schools (e.g., communicating with parents about program expectations, evaluations)
Type 3: Parent involvement in schools (e.g., volunteering in classrooms)
Type 4: Parent involvement in learning and development activities at home
Type 5: Parent involvement in governance and advocacy

The typology helps researchers view parent involvement mainly from the perspective of schools and helps them conduct studies concerned with what schools can do to stimulate more active parent involvement. Epstein's (1992) typology reveals that although parent involvement is often perceived as unidimensional, in reality, it is probably better to conceptualize the construct as multifaceted in nature. Parent involvement subsumes a wide variety of parent behavioral patterns and parenting practices, such as (a) aspirations for their children's academic achievement and parents' transmission of such aspirations to their children, (b) parent participation in school activities and communication with teachers concerning their children's progress, and (c) parent involvement in homework. There is evidence that certain dimensions of parent involvement may have more noticeable effect than some other dimensions on students' academic achievement (McNeal, 2001; Singh et al., 1995). Fan and Chen (2001) conducted a meta-analysis to synthesize the quantitative literature on the relationship between parent involvement and students' academic achievement and found that parent involvement in learning and development activities at home had the weakest relationship with students' achievement. Similarly, Fullan (1991) claimed that parent involvement in school (as volunteers or assistants) had a more direct impact on instruction than all other forms of parent involvement. The involvement of parents as individuals is a particularly crucial issue for the development of a school policy, and it falls into two main categories: (a) parent involvement in the life of the school or classroom in general and (b) parent involvement as supporters of their child (Organization for Economic Co-operation and Development [OECD], 1997). The two types of activities are connected in that the relationship that a parent has with a school is likely to affect his or her child's attitude, commitment (McNeal), and level of achievement (Merttens, Newland, & Webb, 1996).

Hoover-Dempsey and Sandler (1995) and Watkins (1997) expected that parent involvement in teaching activities at school would influence students' achievement because of parents' ability to offer modeling, reinforcement, and instruction that supports the development of attitudes, knowledge, and behaviors associated with successful school performance. Delivering the curriculum to the students in the classroom is the teachers' professional task. Although trained and experienced teachers often are hesitant to have volunteers closely involved in their work (Georgiou, 1996; Kyriakides, 1997), teachers involved in a well-planned curriculum often find that parents can be a valuable resource and that their roles do not lead to a less professional teaching environment (OECD, 1997). Also, parents may benefit from an increased understanding of the education process. Finally, students may begin to realize that school is not a world isolated from everyday life, because adults other than teachers value the learning that takes place in school.

Although initiatives in Canada, England, Wales, Ireland, and the United States demonstrate that, especially in the early grades, teachers and students can benefit if parents support the teacher in the classroom, this strategy may not necessarily succeed in other countries such as France, Germany, and Japan (OECD, 1997). The latter three countries are relatively homogeneous societies with a strong consensus as to the purpose and processes of education. In more pluralistic societies, parent involvement may be more crucial. But even if active parent involvement is not a necessary condition for effective schooling, the importance of this strategy for improving school effectiveness may reside in the signals that it gives to students, the help it offers to teachers, and the personal growth experienced by the volunteers. All the benefits from parent support can be delivered in different ways in cultures in which teachers and education are traditionally well respected and in which the education system is well funded (Bauch & Goldring, 2000). It is therefore important that researchers investigate the extent to which policies on active partnerships might improve school effectiveness in a country such as Cyprus, where its citizens have a high regard for education and the society is homogeneous.

Research Aims

In this article, I evaluate a policy on parents' active involvement of a primary school in Cyprus, which the school adopted to improve its effectiveness. (Information about the context of the education system of Cyprus and the socioeconomic and cultural differences in Cypriot society is

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

provided in Appendix A to enable international readership to contextualize the findings of this investigation.) The official policy documents in Cyprus provide little about the concept of partnerships, now given high priority in many other countries (United Nations Educational Scientific and Cultural Organization, 1997). Support for more parent involvement in the schools is now widespread among most OECD countries, and recent major legislation has made parent involvement in their children's education a national priority (Goals 2000: Educate America Act, 1994). The lack of such a policy in Cyprus can be linked with the fact that parents traditionally had little power to influence practice (Kyriakides, 1997). This study had four aims. The first aim was to determine whether my findings provide a basis for the development of a policy on home–school partnerships in Cyprus.

A second aim was to test McNeal's (2001) argument that parent involvement predominantly affects behavioral outcomes and has little direct effect on cognitive achievement. In addition, some empirical evidence has revealed a stronger relationship between parent involvement and academic achievement when it is represented by more global indicators of achievement (e.g., grade point average) than by academic subject-specific indicators (Fan & Chen, 2001). I considered the evidence and the impact of parent involvement on student achievement in each of the three core subjects of Cyprus curricula (Ministry of Education, 1994). A third aim was to examine Epstein's (1991) argument that gains in achievement might occur only in subject areas in which parents feel confident to support learning. A fourth aim was to investigate further the argument that partnership benefits are related to SES, because Cypriots have a high regard for education irrespective of their SES (Eliophotou, 1998).

School Policy on Parent Involvement

In this section, I briefly outline the attempt of a primary school in Cyprus to develop a policy on active partnerships to improve its effectiveness. The decision to develop this policy was based partly on findings of research into school effectiveness and school improvement. Hopkins (1995) considered the involvement of a range of broad community partners as a significant school improvement strategy. The majority of effective and improved schools had several characteristics in common. One characteristic was the significant involvement of parents and the broader community in the life of the school and in the school's efforts to raise levels of student achievement (Teddlie & Reynolds, 2000). Epstein's (1992) typology helped frame the partnership policy in that, among all the types of parent involvement, active parent involvement may have the strongest impact on student achievement. Thus, the head teacher and the other teachers at the school decided to conduct an action research project to improve school effectiveness by encouraging parents to work in their children's classroom while teaching was taking place. My research team trained parents and teachers to work as collaborators, with complementary responsibilities. In this setting, parents became advisors, learners, and teacher aides. Thus, the notion of partnership that the school adopted was similar to the third type of Epstein's (1992) typology.

Specifically, the teachers asked parents to take part in group tasks that their children had to complete in the classroom. They also were invited to help with reading. Although in the early 1980s there were several projects in England that were influential in terms of demonstrating the importance of parents' role in supporting children's learning to read (Macbeth, 1989; Merttens, Newland, & Webb, 1996), the school decided not to give parents the task of listening to readers all the time but to use parents across the curriculum in the classroom. The school also realized that there was a danger in giving parents "tidying-up jobs" which, though necessary, are hardly likely to inspire parents to maintain a regular commitment. Thus, teachers could consider parents with special experiences or job responsibilities as learning resources for teaching a specific unit and could ask parents to talk to children about their experiences during a lesson. For example, teachers asked parents who were born in an area of Cyprus that was being studied under a social science teaching unit to talk to their children's entire class about their birth place and show them illustrative materials, such as personal photographs and books. In addition, when students studied the features of working in a hospital or a bank, parents who worked in a local hospital or bank presented first-hand experiences about their jobs and were then interviewed by the students.

The school also decided that when teachers planned activities, the planning should involve activities for the parents; the school gave particular emphasis to ensure that parents understood the purposes of the activities. Thus, teachers put aside sufficient time to explain the activity or to write clear instructions, or both. Teachers also talked with the parents at the end of each session to receive feedback and to make parents feel valued. Those approaches were incorporated into the evaluation of the policy in a developmental way. The results of summative evaluation are presented below.

Method

The summative evaluation of home–school partnership policy included multiple sources of data collection.

Students' Educational Progress During Implementation of School Policy on Partnership

I collected measures of the educational progress made by students during the implementation of the policy on partnership by using two forms of assessment (external assessment and teacher assessment). Written tests in each of the

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

three main subjects of the primary curriculum (Greek language, mathematics, and social science) assessed knowledge and skills of Year 5 students identified in the Cyprus Primary Curriculum (Ministry of Education, 1994). I administered the written tests to Year 5 students (N = 92) three times: (a) before the introduction of the school policy on partnerships (November 1997), (b) at the end of the implementation of the policy (May 1998), and (c) 6 months after the implementation of the school policy (November 1998). Before the introduction of the partnership policy, teachers completed a report for each student that indicated whether the child had acquired the skills and knowledge that Year 5 students were expected to acquire in the three core subjects (Ministry of Education, 1994). By the end of the implementation of the policy, and also 6 months later, teachers again completed reports for each child.

The same written tests were administered in November 1997, May 1998, and November 1998 to Year 5 students (N = 95) at the control school. I also asked teachers of Year 5 at the control school to complete reports for each student. Therefore, I could compare the attainment of students at the school under study before the introduction of the school policy, at the end of the implementation of school policy, and 6 months after the implementation of the policy with the attainment of students in the control school.

Both schools were the only public primary schools of the two villages. Both villages were the same size (i.e., approximately 7,000 citizens), and the majority of the residents were farmers. The chi-square test did not reveal any statistically significant difference between the students of the two schools in terms of sex or parents' educational background or occupation. Moreover, the t test did not reveal any statistically significant difference between the two groups of students in relation to their age. Thus, the students at the school that introduced the policy on active partnership had the same demographic characteristics as the students at the school that did not introduce partnership policy. Moreover, a study on school effectiveness, which was conducted during the same period in Cyprus, revealed that both schools were classified as neither among the most nor among the least effective schools (Kyriakides, Campbell, & Gagasis, 2000).

Using the Spearman correlation coefficient, I identified statistically significant relations ($p < .001$) between findings gathered from the written tests and findings from teacher assessments of student skills in each subject before, at the end of, and 6 months after the implementation of the partnership policy. I calculated Spearman, rather than Pearson, correlation coefficients because teacher assessment was reported on an ordinal scale (Siegel & Castellan, 1988). The values of Spearman correlation coefficients were relatively high. I also measured the reliability of the findings on student achievement by calculating the values of Cronbach's alpha for the scales used to measure student knowledge. The values of Cronbach's alpha for the scales that I used to measure student responses were all higher than 0.80. Similarly, the values of Cronbach's alpha for the scales that I used in teacher reports were higher than 0.85.

Parent and Student Attitudes Toward School Policy on Partnership

I conducted an investigation of parent attitudes by asking parents to complete a questionnaire. The content of the questionnaire was derived from a content analysis of the school policy on partnerships. Two broad areas of parent attitudes included attitudes about active partnership and perceived impact of partnership policy. I examined parents' perceived impact of policy by asking them to identify the kind of information that they could acquire through school visits. Also, I asked parents to identify whether school policy had any impact on their children's behavior. Of the 178 parents approached, 141 (79%) responded, which implied that the findings were generalizable to the population. In addition, I conducted semistructured interviews with seven parents who responded to the questionnaire to examine the internal validity of the questionnaire findings by matching the qualitative data derived from the interview with each parent against the quantitative data gathered by his or her individual questionnaire (Cohen, Manion, & Morrison, 2000).

I followed a similar approach to investigate student attitudes toward school policy on partnerships. Specifically, I asked all students of Year 5 (N = 92) to complete a specifically designed questionnaire that measured their attitudes toward the school policy on partnerships. I asked students to explain how they felt when they were told that they had to participate in this program—almost all of them completed the questionnaire (n = 89). I also conducted semistructured interviews with 5 students to examine the internal validity of the findings concerning student attitudes toward the partnership policy. I measured the reliability of the findings regarding student and parent attitudes toward school policy by calculating the values of Cronbach's alpha for the scales used for measuring student and parent attitudes. The values of Cronbach's alpha for the scales that I used to measure student and parent responses on each questionnaire were higher than 0.75.

Results

The teachers reported that no parents actively participated in school activities before the introduction of the partnership policy. However, the participation rate of parents in the program was relatively high (66%), according to teacher records. The results of the summative evaluation of the partnership policy are presented in this section. The results concerned with the effect of the school policy on students' educational progress are presented in the first two parts of this section; results concerning parent and student attitudes toward school policy are presented in the third part of the section.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

Impact of School Policy on Student Progress: Before, at the End of, and Six Months After Implementation

The means and standard deviations of the six forms of measuring student attainment before the implementation of the active partnership policy, at the end of, and 6 months after, implementation of policy in the experimental and control schools are shown in Table 1. I carried out a repeated-measures multivariate analysis of variance (MANOVA) of Treatment (Introducing a Policy or No Policy) × Time (Before [Pre]/End [Post]/6 Months After [Post–Post]) with the six forms of measuring student achievement as dependent variables. I followed the MANOVA with univariate analyses to determine which of the six dependent variables contributed uniquely to the overall effect.

The findings showed significant main effects of treatment, $F(6,180) = 8.54$, $p < .001$, and time, $F(12, 174) = 60.23$, $p < .001$. The main effects were modified by a significant Treatment × Time interaction, $F(12, 174) = 22.25$, $p < .001$. Univariate analyses revealed that the interaction was explained by each of the six variables that measured student achievement: (a) written test of language, $F(2, 180) = 30.39$, $p < .001$; (b) written test of mathematics, $F(2, 180) = 42.85$, $p < .001$; (c) written test of social science, $F(2, 180) = 19.09$, $p < .001$; (d) teacher assessment of language, $F(2, 180) = 18.02$, $p < .001$; (e) teacher assessment of mathematics $F(2,180) = 49.50$, $p < .001$; and (f) teacher assessment of social science, $F(2,180) = 41.80$, $p < .001$. As shown in Figures 1–6, students of the experimental school achieved higher grades than did students at the control school in each form of assessment in the three core subjects at the end of the implementation of the policy and 6 months later. That result implies that students of the experimental school made more progress in each of the three subjects, and this difference was maintained 6 months after implementation of the policy.

Value-Added Analyses of Progress of Students at the School With the Partnership Policy

The second part of this section deals with the fourth aim of the study concerning the argument that partnership is more beneficial for some groups of students (i.e., middle-class students). Therefore, I presented results of value-added analyses of the progress of students of the school that introduced active partnership policy in each of the three subjects. Thus, I identified the extent to which variation in students' progress can be attributed to student background factors. Although the identification of differences in the progress of various SES groups of students might reflect the capacity of the experimental school to be effective with different groups of students and might not be attributed to the policy, a study on differential school effectiveness conducted recently in Cyprus revealed no evidence of significant differential effectiveness in relation to SES (Kyriakides, 2004). In addition, I conducted value-added analyses of the progress of students in the control school. Therefore, the factors that were related to the progress of students of the experimental school were compared with the factors that were related to the progress of students at the control school.

TABLE 1. Means and Standard Deviations for Attainment of Students at the Experimental and Control Schools During Various Stages of Partnership Policy Implementation

Assessment forum	Experimental school		Control school	
	M	*SD*	*M*	*SD*
Before policy introduction				
Language written test	5.80	1.13	5.73	1.02
Mathematics written test	4.47	0.93	4.27	0.76
Social science written test	5.18	0.93	5.25	0.86
Language teacher assessment	5.82	1.03	5.78	0.96
Mathematics teacher assessment	3.82	0.87	3.78	0.96
Social science teacher assessment	5.02	1.02	5.20	1.06
End of policy implementation				
Language written test	6.15	0.97	5.41	0.89
Mathematics written test	5.32	0.86	4.51	0.75
Social science written test	5.48	0.90	5.27	0.80
Language teacher assessment	6.12	1.00	5.58	0.96
Mathematics teacher assessment	4.88	1.00	4.17	0.96
Social science teacher assessment	5.62	1.02	5.08	1.06
Six months after policy implementation				
Language written test	6.37	0.98	5.64	0.82
Mathematics written test	6.02	0.82	4.81	0.93
Social science written test	5.88	0.93	5.35	0.85
Language teacher assessment	6.43	1.13	5.88	0.88
Mathematics teacher assessment	5.72	1.13	4.64	1.06
Social science teacher assessment	5.92	1.13	5.28	0.96

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

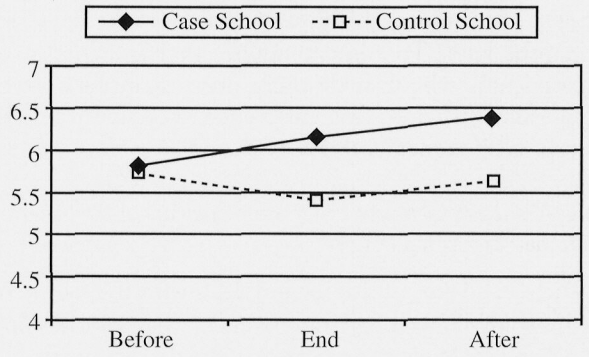

FIGURE 1. Estimated marginal means of student achievement on the language written test.

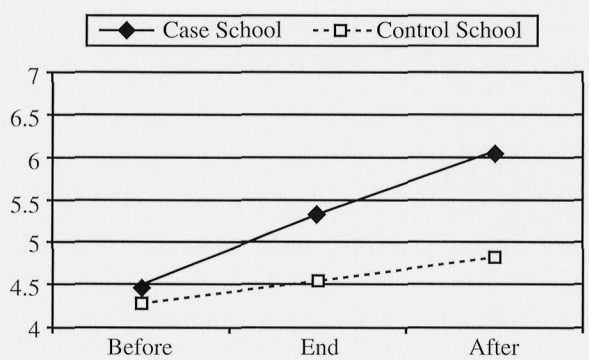

FIGURE 2. Estimated marginal means of student achievement on the mathematics written test.

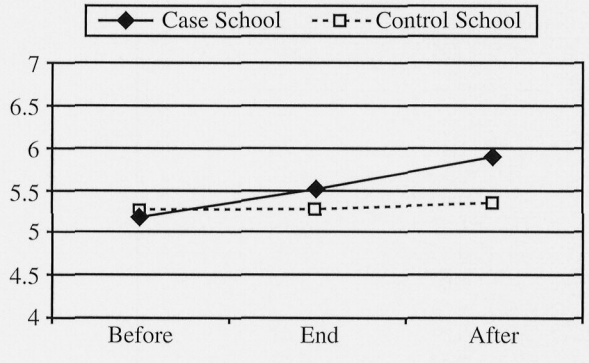

FIGURE 3. Estimated marginal means of student achievement on the social science written test.

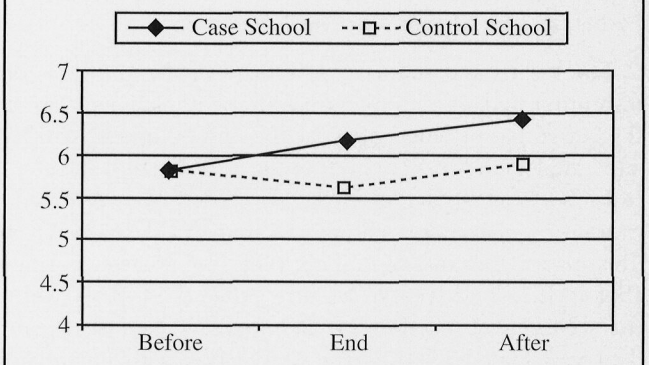

FIGURE 4. Estimated marginal means of student achievement on the language teacher assessment.

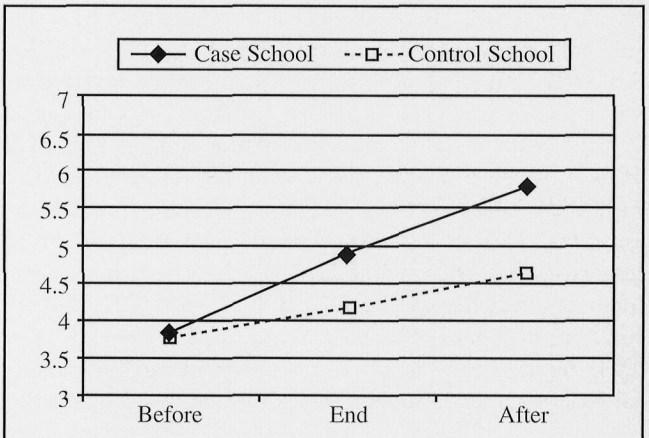

FIGURE 5. Estimated marginal means of student achievement on the mathematics teacher assessement.

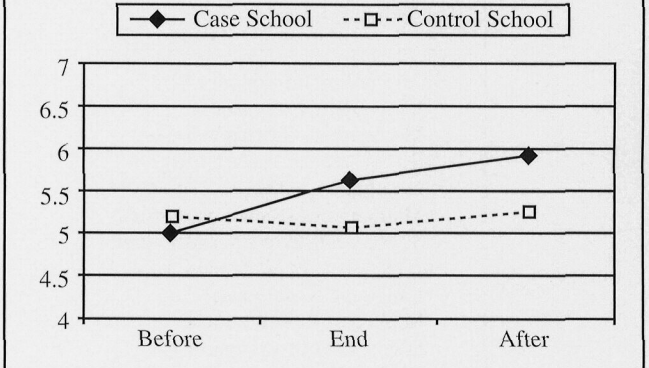

FIGURE 6. Estimated marginal means of achievement on the social science teacher assessment.

I used multilevel modeling as the method of analysis (Goldstein, 1995). In its detail, multilevel modeling is a relatively new approach to the analysis of hierarchically structured data (e.g., students within classrooms within schools), but in broad terms, it is an elaboration of multiple regression to incorporate the hierarchical structure of data (see Paterson & Goldstein, 1991). The advantage of multilevel modeling is that it explicitly models the hierarchical structure of the data and, like multiple regression, one can use multilevel modeling to investigate differences such as those between the performance of boys and girls, having

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

taken into account their attainment on entry. I used a two-level structure, with students (Level 1) grouped within classes (Level 2). I also used a multilevel model to compare the effect of each individual student background factor against a reference group, which, in this case, was a group of girls of average age whose parents had graduated from a secondary school and held middle- or upper-class jobs.

Student age and sex could be measured easily, but controlling for SES is a research challenge (Jeynes, 2002). For nearly 30 years, social scientists have debated the best way to control for SES when examining educational outcomes. A measure of SES typically has three major components: (a) family income, (b) parent education, and (c) parent occupation. Nevertheless, researchers may, for various reasons, exclude one of the components or exclude certain aspects of a component. I could not collect valid data on family income; therefore, I collected data only on parent education and parent occupation. Kyriakides, and collagues (2000) showed that a great deal of variance in student achievement in Cyprus can be explained by parents' education and occupation. I accounted for that factor by treating the two variables as independent variables. Thus, I collected information on four student background factors: (a) father's educational background, (b) mother's educational background, (c) father's occupation, and (d) mother's occupation.

I classified parents into three groups according to their educational background: (a) graduates of primary school (58%), (b) graduates of secondary school (35%), and (c) graduates of a college or university (17%). Following the classification of occupations used by the Ministry of Finance, I classified parents' occupation into two groups that had relatively similar sizes: (a) occupations held by working-class (61%) parents and (b) occupations held by middle- and upper middle-class (39%) parents. Representative parent occupations for the working class included farmer, truck driver, and machine operator in a factory. Parent occupations for the middle class included police officer, teacher, and bank officer. Upper middle-class parent occupations included doctor, lawyer, and business executive.

Predictive Validity of Means of Assessment Conducted Before School Policy

Table 2 shows the multiple correlations between the attainment before the introduction of the school partnership policy and the attainment at the end of the policy.

TABLE 2. Correlations Between Attainment Measures Before and at the End of Partnership Policy Implementation

Outcome at end of policy	Predictor before policy	Multiple correlation
Mathematics average test score	Mathematics written test	.58
	Teacher assessment in mathematics	.54
	Mathematics average test score	.63
Mathematics written test score	Mathematics written test	.56
	Teacher assessment in mathematics	.53
	Mathematics average test score	.62
Teacher assessment score in mathematics	Mathematics written test	.57
	Teacher assessment in mathematics	.51
	Mathematics average test score	.60
Social science average test score	Social science written test	.54
	Teacher assessment in social science	.54
	Social science average test score	.61
Social science written test score	Social science written test	.51
	Teacher assessment in social science	.53
	Social science average test score	.60
Teacher assessment score in social science	Social science written test	.51
	Teacher assessment in social science	.52
	Social science average test score	.60
Language average test score	Language written test	.59
	Teacher assessment in language	.56
	Language average test score	.62
Language written test score	Language written test	.57
	Teacher assessment in language	.53
	Language average test score	.61
Teacher assessment score in language	Language written test	.57
	Teacher assessment in language	.53
	Language average test score	.60

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

The multiple correlations of 0.63, 0.61, and 0.62 between the average assessment score before the introduction of the policy and the average score after the implementation of partnership policy in mathematics, social science, and language, respectively, reveal that the predictive validity of the measures conducted before the introduction of the school policy was satisfactory (Cronbach, 1990) and can be considered as a satisfactory starting point for conducting value-added analyses. The combination of teacher-completed checklists and written tests provided the best indicator of subsequent student attainment in each of the three subjects, better than either type of assessment would have provided in isolation.

Student Factors and Attainment Before Partnership School Policy (November 1997)

Before I examined whether factors measured by this study were related to student progress during the implementation of partnerships policy, I identified the effect of background factors on student attainment before school partnership policy and at the end of school policy. The second and third columns of Table 3 show the results of the analysis of student attainment before the partnership policy; all measured student background factors were related significantly to student attainment in each of the three core subjects. The attainment of students who were older than average-aged students was significantly higher than was the attainment of students who were younger than average-aged students in mathematics and language, but not in social science. Regarding gender, boys had significantly higher attainment than did girls in mathematics but lower attainment in language and social science. In each of the three subjects, the attainment of students whose parents graduated at least from secondary school was significantly higher than that of students whose parents did not graduate from a secondary school. Similarly, in each subject, the attainment of students whose parents had middle- or upper-class jobs was significantly higher than was the attainment of all other students.

TABLE 3. Fixed Effects of Student Background on Attainment Before and at the End of the Partnership Policy and on Progress During Implementation

	Attainment before		Attainment after		Progress	
Factor/student level	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Language						
Constant (intercept)	8.482*	0.913	1.312*	0.102	0.862*	0.138
Language score before policy[a]	—	—	—	—	0.038*	0.001
Age[b]	0.818*	0.082	0.161*	0.003	0.004	0.003
Sex	0.721*	0.139	0.143*	0.021	0.009	0.006
Parents' education level	1.512*	0.176	0.157*	0.029	– 0.003	0.002
Father's occupation	1.231*	0.286	0.132*	0.038	0.002	0.001
Mother's occupation	0.874*	0.118	0.048	0.017	– 0.014*	0.003
Mathematics						
Constant (intercept)	9.425*	1.013	1.428*	0.113	1.021*	0.205
Mathematics score before policy[a]	—	—	—	—	0.048*	0.002
Age[b]	0.858*	0.082	0.148*	0.018	0.004	0.002
Sex	–0.841*	0.079	–0.153*	0.022	–0.039*	0.010
Parents' education level	1.245*	0.086	0.167*	0.021	0.009	0.006
Father's occupation	1.213*	0.081	0.135*	0.038	–0.011	0.007
Mother's occupation	0.987*	0.102	0.049	0.021	–0.032*	0.012
Social science						
Constant (intercept)	8.414*	0.994	1.357*	0.1227	1.023*	0.198
Social science score before policy[a]	—	—	—	—	0.048*	0.001
Age[b]	0.438	0.115	0.011	0.005	0.004	0.003
Sex	0.821*	0.193	0.143*	0.021	0.022*	0.009
Parents' education level	1.112*	0.576	0.057	0.029	–0.019	0.021
Father's occupation	1.235*	0.488	0.132*	0.038	–0.028	0.027
Mother's occupation	0.878*	0.199	0.048	0.021	0.012*	0.003

Note. Dashes indicate that variables were not entered into the analysis.
[a]Baseline score was fitted only in the progress model. [b]Variable centered on grand mean.
*Coefficients significant at $p < .05$.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

Student Factors and Attainment at the End of the Partnership Policy (May 1998)

The fourth and fifth columns of Table 3 show the results for the analysis of student attainment after the implementation of the partnership policy. All the measured student background factors, except for mother's occupation, were related to students' attainment at the end of the policy. Again, younger students had lower scores than did older students in mathematics and language. Boys had higher attainment than did girls in mathematics but lower attainment in language and social science. Furthermore, the attainment of students whose parents graduated from secondary school was higher than that of students whose parents did not graduate from secondary school. Finally, the attainment of students whose fathers had middle- or upper middle-class jobs was higher than was the attainment of all other students. Mother's occupation did not appear to be significantly related to the attainment of students at the end of the implementation of school policy.

Student Factors and Progress During Implementation of the Partnership Policy

The following observations resulted from the figures of the last two columns of Table 3, which show the effect of background factors on student progress. I also examined the effect of student attainment before the partnership policy on student progress. First, student attainment before the introduction of partnership policy, which can be considered as the baseline score, was the most important factor in relation to students' progress in each of the three subjects. That finding seemed to correspond with findings of current research on value-added assessment (Kyriakides, 2002; Strand, 1997; Tymms, Merrell, & Henderson, 2000). Second, boys made more progress than did girls in mathematics. That finding implies that the gender gap in language and social science was not reduced; the gender gap in mathematics became even larger during the implementation of partnership policy.

Third, neither parent's educational background nor father's occupation appeared to be related significantly to students' progress in each of the three subjects while the partnership policy was being implemented. However, students whose mothers were housewives made more progress. Despite the fact that figures in Table 3 reveal that variables measuring SES had an impact on student achievement before and after the partnership policy was implemented but did not have any impact on the progress that students made during this period, further information regarding the achievement of groups of students by SES before and after the implementation of the school policy is provided in Appendix B.

The value-added analyses of the progress of students at the control school showed no SES effect (Kyriakides, 2000). I also found that the gender gap in mathematics became larger when the partnership policy was implemented. That finding implies that the student background factors that were associated with the progress of students at the control school (i.e., sex and baseline score) also were associated with the progress of students at the experimental school. Therefore, the partnership policy was equally beneficial for all students, irrespective of SES.

Differences Between Classrooms

I also explored classroom effects on student progress in language through three multilevel regression models. The first model (null model) included only the intercept term and indicated raw differences between classrooms at the end of the implementation policy. In the second model, I explored the effect of adding information on students' backgrounds, including baseline score, sex, age, parents' education level and occupations. In the third model, I explored the effect of including variables at the classroom level, especially (a) average baseline score, (b) percentage of girls, (c) percentage of students whose parents had graduated from a secondary school, (d) percentage of students whose fathers had middle- or upper middle-class jobs, (e) percentage of students whose mothers had middle- or upper middle-class jobs, and (f) mean age of the students. Those variables were aggregated from the student-level data.

Simple arithmetic means for language score at the end of the partnership policy varied between classes (range = 0.93 points). The analysis of the data revealed also that knowledge about students' prior attainment and background explained much of the student variation in their language achievement (34%) but very little of the class-level variation (4%). Moreover, I found that baseline score was the most significant of the student background factors because it reduced the student variation in language scores at the end of the implementation of partnership policy by 29%. Including the classroom compositional factor in the third model explained no more of the student-level variation but significantly reduced the classroom level variation by 38%.

A substantial amount of the difference between classrooms in student progress during the implementation of partnership policy was explained by the overall composition of the classroom intake. However, substantial differences between classrooms remained. The third model revealed that about 10% of variation in students' scores was attributable to classrooms. Having controlled for student factors and classroom contextual factors, results showed that substantial differences remained for students' performance in language. Specifically, I identified two classrooms in which student progress was significantly lower than expected, and one classroom in which student progress was significantly higher than expected.

I used the approach described in the preceding paragraph to examine the classroom effects on student progress in mathematics and social sciences. The results were similar to those from the analysis of classroom effects on students'

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

progress in language. Specifically, students' prior attainment and background explained substantial variation in student achievement in mathematics (31%) and social science (28%), but very little of the class-level variation in mathematics (5%) and social science (3%). Also, classroom composition explained no additional student-level variation but significantly reduced the classroom-level variation by 35% in mathematics and 32% in social science. Finally, 12% of the variation in students' mathematics scores was attributable to classrooms, and 9% of variation in social science scores was attributable to classrooms. Therefore, the results of my using multilevel modeling approaches to analyze the progress of students in each subject during the implementation of partnership policy revealed that although there was no statistically significant difference in relation to the progress of students of different SES group in each subject, the class of which the student was a member during the implementation of the policy made a difference to the educational progress in each subject because classrooms with intake of similar attainment and of similar composition achieved significantly different results at the end of the implementation.

Parent and Student Attitudes Toward Partnership Policy

This section is concerned with the main findings derived from parent and student responses to the questionnaires investigating attitudes toward the partnership policy. I could not match the data on parents' and children's perceptions with the individual performances of each student in the three core subjects because data on perceptions were collected through questionnaires answered anonymously to ensure confidentiality (Oppenheim, 1996). However, a questionnaire item asked parents to indicate their child's general school achievement as reported by his or her teacher. According to parents' responses to that item, I created groups of parents according to their responses to identify differences among their perceptions. Moreover, I included items in the questionnaire asking students to provide information in relation to parent occupation and educational background, and I made comparisons among the perceptions of groups of students.

Parent Attitudes Toward School Policy

Table 4 shows the percentages of parents who disagreed and parents who agreed with each aspect of school policy on partnership, along with the medians and the modes. First, more than 90% of parents did not believe that visiting their child's class was a waste of time. Parents also mentioned that they would like their school to implement a partnership policy during the following academic year. Second, a large majority of parents indicated that they enjoyed their visits and that the implementation of active partnership policies contributed significantly to improved communication between parents and teachers. Moreover, more than 80% of parents claimed that the implementation of an active partnership policy gave parents the opportunity to be involved in the development of school policy. Third, the majority of parents claimed that active partnership policies are necessary because they allow parents to obtain information that they could not get from meetings with teachers. Parent responses revealed, therefore, that they had positive attitudes about active parent participation in school.

Conversely, a significant percentage of parents claimed that it was difficult for them to find time to visit their child's classroom. The large majority (85%) of those who believed that it was difficult for parents to participate in this program were fathers, whereas the majority of those who disagreed with this item were housewives (60%). Those findings correspond with high participation by housewives (72%) who worked in the classrooms.

Fourth, more than 85% of parents claimed that school visits helped them learn about their children's achievement, the kind of teaching activities children undertook in school, and the new teaching methods used by their children's teachers. Moreover, three out of four parents claimed that they had managed to identify ways in which they could help their children learn. Fifth, the majority of parents realized that they had misunderstood their children's school achievement, and a significant percentage (39.7%) had misunderstood their children's behavior at school. Sixth, the majority of parents (62.6%) argued that the partnership project provided an opportunity to observe new teaching methods and helped them realize that teaching was not based on repetitive exercises in arithmetic, reading, and writing. Seventh, almost half of the parents reported that their involvement in the partnership project helped them reexamine the expectations that they held for the school. Interview data revealed that before the introduction of the partnership policy, parent expectations were shaped mainly by their experiences of having been students themselves (Kyriakides, 1999).

Parents' responses concerning the impact of school policy revealed that they believed that the implementation of school policy had contributed significantly to improved communication with teachers because it offered the opportunity to acquire information about teaching practice and student achievement. However, only half of the parents claimed that they had managed to improve their knowledge on the subjects taught in school. Carrasquillo and London (1993) argued that disadvantaged parents are not prepared to help with homework because of their own limited education. Pena (2000) claimed that parents' limited education and personal difficulties with the school lead to fear and mistrust. However, in this study, the rates of participation of low-SES families were as high as those of middle-class and upper middle-class families.

Finally, parents claimed that the implementation of this policy had a significant impact on their children's behavior at home. The majority of parents thought that their chil-

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

TABLE 4. Percentages of Parents (N = 141) Who Disagreed and Agreed with Aspects of Partnership Policy, Medians, and Modes

Aspects of active partnership policy	% of parents Disagreed[a]	% of parents Agreed[b]	Median	Mode
Attitudes toward active partnership				
1. It is a waste of time for parents to visit their child's class.	90.3	2.8	1.00[c]	1.00
2. The next school year parents should have the opportunity to be actively involved in school practice.	0.7	95.3	5.00	5.00
3. It is difficult for parents in our school to find time to visit their children's classrooms.	48.4	27.4	3.00	2.00
4. I enjoyed visiting the class of my child while the lessons were taking place.	8.5	88.0	4.00	4.00
5. The implementation of an active partnership policy gives parents the opportunity to have a voice in school policy and practice.	14.8	80.3	4.00	4.00
6. Policy on parents' active involvement improves communication between parents and teachers.	4.9	88.7	4.00	5.00
7. It is unnecessary for parents to visit their children's class because teachers can provide parents with all the information they get by class visits.	53.2	22.7	2.00	2.00
Perceived impact of school policy on partnership				
1. My visits to the school gave me the opportunity to improve my knowledge about the content of the subjects taught at primary school.	34.0	49.6	3.00	3.00
2. School visits gave me the opportunity to find out				
(a) my child's achievement in each subject;	3.5	86.6	4.00	5.00
(b) that the content of several subjects and the ways of teaching have changed since I was a student;	26.4	62.6	4.00	4.00
(c) the kind of teaching activities that children undertake in school;	2.1	88.0	4.00	4.00
(d) the new teaching methods the teachers use to help children learn;	7.9	86.6	4.00	4.00
(e) ways which I could use to help my child learn;	17.7	76.6	4.00	4.00
(f) that I had a wrong impression about my child's school achievement;	30.1	60.9	4.00	4.00
(g) that I was wrong in my perception about my child's behavior at school.	38.9	39.7	3.00	3.00
3. During the period when the school policy was implemented, my child				
(a) became more systematic in doing his/her homework;	21.4	64.4	4.00	4.00
(b) behaved better at home.	36.2	46.6	3.00	3.00
4. This policy helped me to reexamine my expectations from my child's school.	41.8	49.6	3.00	4.00
5. My class visits helped me to realize that teaching is not based on a number of repetitive exercises on reading, writing, and arithmetic.	24.2	59.6	4.00	4.00

[a]Parents either disagreed or absolutely disagreed. [b]Parents either agreed or absolutely agreed. [c]Absolutely disagree; disagree; do not know/cannot say; agree; absolutely agree.

dren became more systematic in doing their homework. By taking into account parents' responses to the item concerning their child's general school achievement, I found that most of the parents of less able students (86%) thought that their children became more systematic, whereas only 23% parents of more able students agreed with this item. The Kolmogorov-Smirnov two-sample test revealed a statistically significant difference between the responses of parents of less able students and parents of more able students in relation to this item (K-S; $z = 2.31$, $p < .001$). Moreover, almost 50% of parents thought that their children's behavior improved at home while the partnership policy was being implemented, and the large majority of parents (71%) were parents of less able students; only 5% of more able students agreed with this item. Again, the Kolmogorov-Smirnov two-sample test revealed a relevant statistically significant difference between the responses of parents of less able and more able students (K-S; $z = 3.67$, $p < .001$). Therefore, parents, especially of children who were less able, believed that the school policy had a significant impact on their children's behavior.

Student Attitudes Toward Partnership Policy

Table 5 shows percentages of students who felt unhappy, those who felt indifferent, and those who felt happy during the various phases of the partnership policy (medians and modes also are shown.) First, almost all students revealed that they felt happy when one of their parents visited their classroom and when a parent made a presentation to the class. Second, the large majority of students enjoyed the fact that parents cooperated with them in completing group tasks. They also felt happy when parents of their classmates worked in their classroom. Third, the majority of students felt unhappy when they heard that the program was going to end. Fourth, few (4.2%) students felt unhappy about parents

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

TABLE 5. Percentages of Students Who Felt Unhappy, Indifferent, and Happy During the Implementation of the School Policy on Partnership, Medians, and Modes

Student feelings	% of students			Median	Mode
	Unhappy	Indifferent	Happy		
1. When you were informed by the teacher about the program	12.5	16.7	70.8	3.00[a]	3.00
2. When one of your parents stayed in your classroom	6.3	5.3	88.4	3.00	3.00
3. When parents of your classmates stayed in your class	4.2	20.8	75.0	3.00	3.00
4. When you had to attend a presentation made by a parent	0.0	4.2	95.8	3.00	3.00
5. When parents worked with you completing group tasks	4.2	17.0	78.8	3.00	3.00
6. When parents took part in school trips	4.2	51.6	44.2	2.00	2.00
7. When none of your parents visited the classroom	33.3	45.8	20.9	2.00	2.00
8. When no parent stayed in the classroom	29.2	54.2	16.6	2.00	2.00
9. When you heard that the program was going to finish	64.5	21.5	13.0	1.00	1.00

[a]1 = unhappy; 2 = indifferent; 3 = happy.

accompanying them on a school trip. Fifth, a significant percentage of students (33%) felt unhappy if their parents did not work in the classroom. Students felt happy when school policy on partnership was implemented and unhappy when parents could not visit their classrooms. The Kruskal–Wallis one-way analysis of variance revealed no statistically significant difference (K–W = 2.02, $df = 2$, $p < .36$) between attitudes of students of different SES groups. Therefore, students of all SES groups developed positive attitudes toward their school's partnership policy.

Discussion

Results of the summative evaluation of school policy on partnership revealed that before the introduction of the policy, the attainment of students in the experimental school in each subject was not higher than the attainment of students of the control school. At the end of the implementation of this policy, as well as 6 months later, students of the experimental school had higher attainment in each subject. Students at the experimental school had the same demographic characteristics as the students at the school without a partnership policy. However, I could not examine whether the students at the two schools differed in terms of other characteristics such as motivation, cognitive learning style, and personality, which are likely to affect educational achievement (Furnham, 1995). Also, I could not compare other factors at the school level that were likely to affect school effectiveness such as school climate and the leadership style of the head teachers (Teddlie & Reynolds, 2000). Therefore, I cannot claim that students' achievement gains were caused solely by parent involvement. However, schools that make parent involvement a priority perceive that student outcomes improve in some way (Okagaki & French, 1998). Moreover, the value-added analyses of student attainment revealed that partnership policy was beneficial for all students irrespective of their SES.

I derived similar findings from investigating the impact of the partnership policy on student learning in all three subjects. Those findings imply that parents were able to support student learning even in subjects in which parents did not feel confident with at the beginning of the program (i.e., mathematics). Thus, the findings of this study do not support the assumption that gains in achievement occur only in subjects in which parents feel confident. The fact that students of different SES groups made the same progress may be attributed to cultural factors affecting the education system in Cyprus, which contribute to the development of parents' positive attitudes toward the school policy on partnerships (Kyriakides, 1999). However, students whose mothers were housewives (i.e., not in the workforce) made the most progress in each of the three subjects. That finding can be attributed to the fact that mothers who were housewives visited the school often and worked with their children (Kyriakides, 2000). Although the introduction of a policy on active parent involvement is equally beneficial for students of all SES groups, introducing such a policy in areas in which parents do not have time to visit the schools and participate in the program would be difficult. Further

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

research is needed to examine whether the findings concerned with the impact of partnership policy on student learning can be generalized and to clarify the difficulties arising from implementing such a policy.

I identified high correlations between socioeconomic characteristics and student attainment in each subject before and after the school implemented the partnership policy. The findings of the value-added analyses show the relative unimportance of a partnership policy compared with student background factors. However, students from the experimental school made more progress in each of the three core subjects than did students from the control school. The comparison of students' progress in the experimental school with students' progress in a similar school helped examine, within limitations, whether the implementation of a policy on partnerships did make a difference on student learning in each of the subjects. Moreover, studies conducted in other countries revealed that those schools that favor involving parents outperform schools with little parent involvement (Griffith, 1996; Reynolds, 1992).

The multilevel modeling analyses of the progress of students of the experimental school revealed that classrooms with intakes of similar attainment and of similar composition achieved significantly different results when they completed the implementation of the partnership policy. The fact that classrooms in this study had strong effects on student learning may be attributed to the character of primary teaching in Cyprus—one instructor teaches his or her students for most of the curriculum, most of the year. That finding is also in line with the fact that a number of studies on effective schools revealed that the classroom level is more influential than the school level when examining student performance (Kyriakides et al., 2000; Muijs & Reynolds, 2000; Wright, Horn, & Sanders, 1997).

Creemers (1994) argued that students' academic outcomes are more heavily dependent on procedures and activities carried out in the classroom than on the procedures and activities implemented at the school level. Although organizational aspects of schools provide the necessary preconditions for effective implementation of the partnership policy, the quality of the interaction that the individual teacher has with his or her students and parents may principally determine student progress and the effective implementation of partnership policy. Therefore, further links between research into parent involvement and research into teacher and school effectiveness should be established, and questions regarding the effectiveness of individual teachers and schools to implement a partnership policy should be addressed. Researchers also should investigate ways to help school leaders and teachers identify practices and policies that encourage parent trust and active involvement in the schooling process (Feuerstein, 2000).

Increased interest in parent involvement as a strategy for school reform and improved standards stem from two bodies of research into parent involvement. In one set of studies, Watkins (1997) examined the family learning environment; in the other set of studies, Sanders (1998) and Cooper and Maloof (1999) investigated the effect of various types of school-initiated parent-involvement programs on students' learning. Although I present findings concerning the impact of a school policy of parent involvement on students learning, the importance of conducting research into the family learning environment in Cyprus has to be acknowledged (Phtiaka, 1996). Chrispeels (1997) examined the relationship between practices of successful home-learning environments and effective school research and used this relationship to propose a typology of home–school–community partnership roles and activities. Research on effective family practices should be combined with effective school research and placed within a typology of partnership roles.

I was concerned not only with the impact of the partnership policy on students' educational progress but also with parent and student attitudes toward this policy. Much curriculum innovation failure has been attributed to policymakers who neglected teacher, parent, and student perceptions (Fullan, 1991). The perceptions of teachers, parents, and students of partnership policy are among the most critical factors regarding the effectiveness of various strategies that could be developed for parent involvement in education (Moore & Lasky, 1999).

By taking into account findings concerned with parent attitudes toward the impact of school policy on partnerships and the results of value-added analysis, the main objectives of the school policy on partnerships were achieved. Students and parents developed positive attitudes toward the school policy on partnerships—and the best proof for this is probably that parents and students wanted to continue working in this manner during the next academic year. Thus, the findings of this study provide further support for the argument that when parents are encouraged and trained to work with their children, they develop better attitudes, become more active, and help support school activities (Bempechat, 1992; Cooper & Maloof, 1999).

Theorists and researchers are currently developing new models of teaching and learning that closely reflect students' home backgrounds and view student diversity as an asset for building a more democratic society (McCarthey, 2000). The findings of the formative and summative evaluation of the school policy on active partnerships reveal that connecting the home and the school is a shared responsibility. Parents must have access to information about school practices. Parent responses to the questionnaire and observation data (see Kyriakides, 2000) revealed that parents received enough information and guidance from the school and that the efforts by the school to improve home–school communication were well organized. However, connecting home and school through the implementation of a school policy on active partnerships should be seen as a long-term project. Although parent involvement is still in the beginning stage, evidence shows that collaborative efforts are beginning to pay off. Parents'

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

active involvement appears to be associated with a range of positive outcomes for primary students, including fewer behavior problems and higher student achievement. Those findings imply that Cypriot policymakers should establish mechanisms to encourage schools to develop programs that promote parent involvement.

Finally, suggestions related to the attempt to evaluate a school policy on partnerships can be raised. I used a developmental approach and collected multiple sources of data to conduct a whole-school evaluation (Patton, 1991) and thereby identify the impact of school partnership policy on student learning and on the attitudes of students, parents, and teachers. I examined the effect of the partnership policy on student learning in different subjects; this helped identify the effect of such a policy across the curriculum and possible difficulties in introducing a partnership policy for specific subjects. I examined the impact of the partnership policy on learning by using a pretest–posttest control-group design. It is important for program evaluation on partnerships that researchers use a combination of an experimental research design and a whole-school evaluation model by conducting relevant case studies. That procedure could not only help identify the impact of the school policy but could also contribute significantly to the development of the partnership policy.

NOTE

Professor Jim Campbell was particularly helpful in discussing many of the issues raised in this article. I would like also to acknowledge the helpful comments of two anonymous referees.

REFERENCES

Bauch, P. A., & Goldring, E. B. (2000). Teacher work context and parent involvement in urban high schools of choice. *Educational Research and Evaluation, 6*(1), 1–23.

Bempechat, J. (1992). The role of parent involvement in children's academic achievement. *The School Community Journal, 2*(2), 31–41.

Bryans, T. (1989). Parent involvement in primary schools: Contemporary issues. In S. Wolfendale (Ed.), *Parent involvement: Developing networks between school, home and community* (pp. 34–46). London: Cassell.

Campbell, J., & Mandel, F. (1990). Connecting math achievement to parent influence. *Contemporary Educational Psychology, 15*, 64–74.

Carrasquilo, A. L., & London, C. B. (1993). *Parents and schools: A source book*. New York: Garland.

Chrispeels, J. (1997). Effective schools and home-school-community partnership roles: A framework for parent involvement. *School Effectiveness and School Improvement, 7*(4), 297–323.

Christenson, S. L., Rounds, T., & Gorney, D. (1992). Family factors and student achievement: An avenue to increase students' success. *School Psychology Quarterly, 7*, 178–206.

Cohen, D., Manion, L., & Morrison, K. (2000). *Research methods in education* (5th ed.). London: Routledge/Falmer Press.

Coleman, P. (1998). *Parent, student and teacher collaboration: The power of three*. London: Sage.

Cooper, T. C., & Maloof, V. M. (1999). Parent involvement in teaching elementary level Chinese, Japanese, and Korean. *The Journal of Educational Research, 9*, 176–183.

Creemers, B. P. M. (1994). *The effective classroom*. London: Cassell.

Cronbach, L. J. (1990). *Essentials of psychological testing* (3rd ed.). New York: Harper & Row.

Edwards A., & Warin, J. (1999). Parent involvement in raising the achievement of primary school pupils: Why bother? *Oxford Review of Education, 25*(3), 325–341.

Eliophotou, M. (1998). Factors influencing the demand for higher education: The case of Cyprus. *Higher Education, 35*, 251–266.

Epstein, J. L.(1987). Parent involvement: What research says to administrators. *Education and Urban Society, 19*(2), 119–137.

Epstein, J. L. (1991). Effects on student achievement of teachers' practices of parent involvement. In S. Silvern (Ed.), *Advances in reading/language research: Literacy through family, community and school interaction* (Vol. 5, pp. 261–276). Greenwich, CT: JAI Press.

Epstein, J. L. (1992). School and family partnerships. In M. Akin (Ed.), *Encyclopedia of educational research* (2nd ed., pp. 1139–1151). New York: Macmillan.

Fan, X., & Chen, M. (2001). Parent involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1–22.

Feuerstein, A. (2000). School characteristics and parent involvement: Influences on participation in children's schools. *The Journal of Educational Research, 94*, 29–40.

Fullan, M. (1991). *The new meaning of educational change*. London: Cassell.

Furnham, A. (1995). The relationship of personality and intelligence to cognitive learning style and achievement. In D. H. Saklofske & M. Zeidner (Eds.), *International Handbook of Personality and Intelligence*. New York: Plenum Press.

Georgiou, S. T. (1996). Parent involvement in Cyprus. *International Journal of Educational Research, 25*(1), 33–43.

Goals 2000: Educate America Act. PL 103–227. 108 Stat. 124, 103rd Cong, (1994).

Goldstein, H. (1995). *Multilevel statistical models*. London: Edward Arnold.

Griffith, J. (1996). Relation of parent involvement, empowerment and school traits to student academic performance. *The Journal of Educational Research, 90*, 33–41.

Griffore, R., & Bubolz, M. (1986). Limits and possibilities of family and school as educators. In R. Griffore & R. Boger (Eds.), *Child rearing in the home and school*. New York: Plenum Press.

Grolnick, W., Benjet, C., Kurowski, C., & Apostoleris, N. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology, 89*, 538–548.

Hoover-Dempsey, K. V., & Sandler, H. M. (1995). Parent involvement in children's education: Why does it make a difference? *Teachers' College Record, 97*, 310–331.

Hopkins, D. (1995). Towards effective school improvement. *School Effectiveness and School Improvement, 6*(3), 265–274.

Jeynes, W. H. (2002). The challenge of controlling for SES in social science and educational research. *Educational Psychology Review, 14*(2), 205–221.

Keith, T. Z., Reimers, T. M., Fehrmann, P. G., Pottebaum, S. M., & Aubey, L. W. (1986). Parent involvement, homework and TV times: Direct and indirect effect on high school achievement. *Journal of Educational Psychology, 78*, 373–380.

Kyriakides, L. (1997). Influences on primary teachers' practice: Some problems for curriculum change theory. *British Educational Research Journal, 23*(1), 39–46.

Kyriakides, L. (1999). Partnership in action: An evaluation of a school policy on parents working with their own children in school. In F. Smit, H. Moerel, K. V. Wolf, & P. Sleegers (Eds.), *Building bridges between home and school* (pp. 103–111). Amsterdam.

Kyriakides, L. (2000). *The effectiveness of a school policy on parents working with their own children in school* (Evaluation Report). Nicosia, Cyprus: Ministry of Education.

Kyriakides, L. (2002). A research based model for the development of policy on baseline assessment. *British Educational Research Journal, 28*(6), 05–826.

Kyriakides, L. (2004). Differential school effectiveness in relation to sex and social class: Some implications for policy evaluation. *Educational Research and Evaluation*.

Kyriakides, L., Campbell, R. J., & Gagatsis, A. (2000). The significance of the classroom effect in primary schools: An application of Creemers' comprehensive model of educational effectiveness. *School Effectiveness and School Improvement, 11*(4), 501–529.

Lareau, A. (1987). Social class differences in family-school relationships: The importance of cultural capital. *Sociology of Education, 60*, 73–85.

Macbeth, A. (1989). *Involving parents: Effective parent-teacher relations*. Oxford: Heinemann.

McBride, B. (1991). Parent education and support programs for fathers: Outcome effects on parent involvement. *Early Child Development and Care, 67*, 73–85.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

McCarthey, S. J. (2000). Home-school connections: A review of the literature. *The Journal of Educational Research, 93*,145–154.
McNeal, R. B. (2001). Differential effects on parent involvement on cognitive and behavioral outcomes by socioeconomic status. *The Journal of Socio-Economics, 30*, 171–179.
Merttens, R., Newland, A., & Webb, S. (1996). *Learning in tandem: Involving parents in their children's education*. Leamington Spa: Scholastic Ltd.
Ministry of Education. (1994). *The new curriculum*. Nicosia, Cyprus: Ministry of Education.
Moore, S., & Lasky, S. (1999). Parents' involvement in education: Models, strategies and contexts. In F. Smit, H. Moerel, K. V. Wolf, & P. Sleegers (Eds.), *Building bridges between home and school* (pp. 13–18). Amsterdam.
Muijs, D., & Reynolds, D. (2000). School effectiveness and teacher effectiveness in mathematics: Some preliminary findings from the evaluation of the mathematics enhancement programme (primary). *School Effectiveness and School Improvement, 11*(3), 273–303.
Natriello, G., & McDill, E. L. (1986). Performance standards, student effort on homework, and academic achievement. *Sociology of Education, 59*, 18–31.
Organization for Economic Co-operation and Development. (1997). *Parents as partners in schooling*. Paris: Author.
Okagaki, L., & French, P. (1998). Parenting and children's school achievement: A multiethnic perspective. *American Educational Research Journal, 35*(1), 123–144.
Oppenheim, A. N. (1996). *Questionnaire design and attitude measurement*. London: Heinemann.
Paterson, L., & Goldstein, H. (1991). New statistical methods of analyzing social structure: An introduction to multilevel models. *British Educational Research Journal, 17*, 387–393.
Patton, M. Q. (1991). *Qualitative evaluation and research methods*. London: SAGE.
Pena, D. C. (2000). Parent involvement: Influencing factors and implications. *The Journal of Educational Research, 94*, 42–54.
Phtiaka, H. (1996). Each to his own? Home-school relations in Cyprus. *Forum of Education, 51*(1), 47–59.
Reynolds, A. J. (1992). Comparing measures of parent involvement and their effects on academic achievement. *Early Childhood Research Quarterly, 7*(3), 441–462.
Rosenholtz, S. J. (1989). *Teachers' workplace: The social organization of schools*. New York: Longman.
Sanders, M. G. (1998). The effects of school, family and community support on the academic achievement of African American adolescents. *Urban Education, 33*(3), 385–409.
Sanders, M. G., & Epstein, J. L. (1998). International perspectives on school, family and community partnerships. *Childhood Education, 74*(6), 340–342.
Siegel, S., & Castellan, N. J. (1988) *Non-parametric statistics: For the behavioral sciences* (2nd ed.). New York: McGraw-Hill.
Singh, K., Bickley, P. G., Trivatte, P., Keith, T. Z., Keith, P. B., & Anderson, E. (1995). The effects of four components of parent involvement on eighth grade student achievement: Structural analysis of NELS-88 data. *School Psychology Review, 24*, 299–317.
Strand, S. (1997). Pupil progress during key stage 1: A value added analysis of school effects. *British Educational Research Journal, 23*, 471–488.
Teddlie, C., & Reynolds, D. (2000). *The international handbook of school effectiveness research*. London and New York: Falmer Press.
Tymms, P., Merrell, C., & Henderson, B. (2000). Baseline assessment and progress during the first three years at school. *Educational Research and Evaluation, 6*(2), 105–129.
United Nations Educational Scientific and Cultural Organization. (1997). *Appraisal study on the Cyprus education system*. Paris: International Institute for Educational Planning.
Watkins, T. J. (1997). Teacher communications, child achievement and parent traits in parent involvement models. *The Journal of Educational Research, 91*, 3–14.
Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11*, 57–67.

APPENDIX A
Cyprus Society and Its Education System

The Cyprus Society in Brief

I conducted this study in Cyprus, a comparatively large island, but a small country; the third-largest island in the eastern Mediterranean, only Sicily and Sardinia are bigger. Cyprus has an area of 3,572 square miles and a population of 629,500 people. The island state has been independent since 1960, after being a British colony for almost a century. Since 1974, it has been divided into the free part of the Republic of Cyprus, and the northern area occupied by Turkey. Politically and culturally, the Republic of Cyprus is comparable to western European countries; it has a low rate of illiteracy and one of the best proportions of university graduates in the world. The island is often aptly referred to as a European country in the Middle East. According to the FitchRatings, Cyprus is a frontrunner in the European Union accession process and, relative to other accession countries, benefits from a long-standing institutional infrastructure essential to the functioning of a market economy. It also has a track record of low inflation and exchange-rate stability and essentially meets the Maastricht fiscal criteria, which is the relevant economical criteria established by the EU.

The economy is driven by thriving tourist and service sectors and a fast-growing export-oriented industry. The performance of the economy has been such that it has combined high real growth with low inflation and low unemployment. Moreover, the economy is characterized by a low external debt service-to-exports ratio and a high international reserves-to-imports ratio. Of the $4.7 billion (in U.S. dollars) annual gross foreign-exchange earnings, 40% originate from tourism, 20% from exports, 9% from transportation, and over 9% from international business and shipping companies. Per capita gross national product is over $16,000 (U.S.), one of the highest in the Mediterranean. Considering other socioeconomic indicators, such as excellent housing conditions, a pollution-free environment, and the low crime rate, one may conclude that the quality of life is better than that reflected by per

(appendix continues)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

capita income alone. Furthermore, the cost of living is substantially lower than in most countries offering a comparable standard and quality of life. Nicosia ranks as 11th least expensive of the leading 58 international business centers surveyed in *Prices and Earnings Around the Globe*, published by the Union Bank of Switzerland in August 2000. Despite the good quality of life in Cyprus, the following three socioeconomic groups are identified in the report produced by the Ministry of Finance in Cyprus: working class (over 65%), middle class (over 20%), and upper class (14%).

As far as the cultural identity of Cyprus is concerned, it is important to note that the island's population includes mainly Greek-Cypriots who are Christian Orthodox and speak the Greek language. More specifically, the following ethnic groups can be found in Cyprus: Greek 78% (99.5% of the Greeks live in the Greek area, 0.5% of the Greeks live in the area occupied by the Turks; Turkish 18% (1.3% of the Turks live in the Greek area, 98.7% of the Turks live in the area occupied by the Turks; Other 4% (99.2% of the other ethnic groups live in the Greek area, 0.8% of the other ethnic groups live in the area occupied by the Turks. Religions include Greek Orthodox 78%, Muslim 18%, Maronite, Armenian Apostolic, and other 4%. Thus, Cyprus society is a relatively homogeneous society with a strong consensus as to the purpose and processes of education. More information regarding the education system of Cyprus is provided in the following paragraphs.

The Education System in Cyprus

Cypriots have a high regard for education because they perceive education as a means of economic survival and of promoting their own coherent culture. That perception of education can be linked with the significant role that the economy of the island played in the development of people's attitudes toward education. Until the early 1960s, a poor child who finished secondary school could get a post as a teacher or a civil servant and could easily join the middle class. His or her socioeconomic status could be higher if he or she managed to obtain a university degree. Education was, in addition, intrinsically respected as learning and wisdom. That contributed to the rapid expansion of education in Cyprus. The percentage of those who finished primary school rose from 56.6% in 1960 to 99.6% in 1999; percentage of university graduates rose from 1.3% in 1960 to 40% in 1999. Although educated people cannot find work easily and are not always the most well-off members of society because of the high rate of unemployment among university graduates, the distinction between educated (i.e., holder of a university degree) and noneducated (nonholder) is particularly important in Cyprus and equally as strong as the distinction between rich and poor. That means that education is still highly esteemed.

One of the main characteristics of the education system in Cyprus is that its administration is centralized; primary and secondary schools are considered as government, not as community, institutions. The maintenance of the centralized system has historical and political origins, and a decentralized system in a small country like Cyprus is very demanding in the area of manpower. With 380 primary schools and 120 secondary schools, Cyprus has the same administrative range as a large local educational authority in England. Cyprus is also much smaller than an administrative region for education in France.

Preprimary, primary, and secondary education are under the authority of the Ministry of Education, which is responsible for educational policymaking, administration of education, and enforcement of educational laws. In addition, teachers' appointments, secondments, transfers, and promotions are the responsibility of the Educational Service Commission, an independent 5-member body, which is appointed by the president of the republic. Local school committees are responsible for constructing, maintaining, and equipping school buildings, but the committees have no say in purely educational matters.

The Ministry of Education attempts to control the system through the curriculum and related regulations. Inspectors who are responsible for the supervision and inspection of schools are appointed by the Ministry of Education and have a twofold responsibility. Inspectors must give guidance to teachers and simultaneously evaluate teachers' work by giving marks, which play a decisive role in teachers' career development. Inspectors' role as assessors creates a climate of mistrust, which tends to undermine the principal role in curriculum and school improvement.

(appendix continues)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

Pedagogy is part of educational policy, and active pedagogy and flexible classroom organization are encouraged in the national curriculum. Teachers are required to give students opportunities to participate in practical and investigative tasks, such as (a) tasks for small groups working cooperatively, (b) differentiated tasks according to the level of difficulty, and (c) individual tasks. A Cypriot teacher concerned with promotion needs to demonstrate to his or her inspector a commitment to implement active pedagogy, although as in other countries , the rhetoric of active pedagogy has outstripped practice. Paradoxically, barriers to the implementation of curriculum policy in Cyprus may lie in the high degree of central control exercised through (a) nationally approved textbooks, (b) a national curriculum specifying the content of the curriculum to be taught to each age group of students, and (c) a specified length of curriculum time. Those barriers create a mismatch between the ideology promoted by the curriculum policy and the administration of the system (Kyriakides, 1999).

School-Based Curriculum Development (SBCD) is very weak in Cyprus and is also a consequence of high central control that does not allow for much differentiation among the schools. Cypriot teachers struggle with their problems and anxieties privately, spending most of their time apart from their colleagues. The need for promoting SBCD stems from the failure of the process of change in Cyprus, arising from the idea that the officers of the Ministry of Education can be the sole definers, arbiters, and guardians of good practice. That idea has encouraged professional dependency. Conversely, SBCD implies that Cypriot teachers should be involved in policy formation and evaluation.

APPENDIX B
Further Statistical Information

TABLE B.1. Means, Standard Deviations, and *t* Values Derived From Comparing Attainment of Students Whose Parents Did Not Graduate From a Secondary School (n = 53) With Attainment of Students Whose Parents Graduated From at Least a Secondary School (n = 39) Before and After Implementation of School Policy

	Did not graduate from secondary school		Graduates of secondary school			
Assessment forum	*M*	*SD*	*M*	*SD*	*t*(90)	*p*
Before policy introduction						
Language written test	5.32	0.87	6.44	1.12	–5.31	.001
Mathematics written test	4.06	0.81	5.05	0.74	–6.05	.001
Social science written test	4.88	0.93	5.59	0.72	–3.93	.001
Language teacher assessment	5.33	0.83	6.46	0.88	–6.32	.001
Mathematics teacher assessment	3.41	0.77	4.48	0.73	–5.23	.001
Social science teacher assessment	4.67	1.03	5.48	0.82	–4.03	.001
End of policy implementation						
Language written test	5.66	0.66	6.82	0.92	–6.99	.001
Mathematics written test	5.05	0.84	5.66	0.77	–3.57	.001
Social science written test	5.24	0.89	5.82	0.79	–3.19	.001
Language teacher assessment	5.75	0.89	6.67	0.89	–4.81	.001
Mathematics teacher assessment	4.53	1.06	5.33	0.71	–4.08	.001
Social science teacher assessment	5.58	1.13	6.38	0.75	–4.03	.001

(appendix continues)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

TABLE B.2. Means, Standard Deviations, and *t* Values Derived From Comparing Attainment of Students Whose Fathers Had Working-Class Jobs ($n = 57$) With Attainment of Students Whose Fathers Had Middle- or Upper-Class Jobs ($n = 35$) Before and After Implementation of School Policy

Assessment forum	Did not graduate from secondary school		Graduates of secondary school			
	M	*SD*	*M*	*SD*	*t*(90)	*p*
Before policy introduction						
Language written test	5.35	0.86	6.51	1.15	–5.49	.001
Mathematics written test	4.15	0.82	5.00	0.84	–4.75	.001
Social science written test	4.94	0.93	5.57	0.74	–3.53	.001
Language teacher assessment	5.42	0.82	6.46	0.95	–5.52	.001
Mathematics teacher assessment	3.47	0.76	4.40	0.70	–5.87	.001
Social science teacher assessment	4.74	1.02	5.49	0.85	–3.91	.001
End of policy implementation						
Language written test	5.74	0.72	6.83	0.95	–6.22	.001
Mathematics written test	5.01	0.84	5.85	0.81	–3.75	.001
Social science written test	4.88	0.93	5.80	0.80	–3.18	.002
Language teacher assessment	5.79	0.92	6.71	0.86	–4.79	.001
Mathematics teacher assessment	4.54	1.02	5.43	0.70	–4.52	.001
Social science teacher assessment	5.37	1.05	6.03	0.82	–3.23	.002

TABLE B.3. Means, Standard Deviations, and *t* Values Derived From Comparing Attainment of Students Whose Mothers Had Working-Class Jobs ($n = 60$) With Attainment of Students Whose Mothers Had Middle- or Upper-Class Jobs ($n = 32$) Before and After Implementation of School Policy

Assessment forum	Mothers with working-class jobs		Mothers with middle-/upper-class jobs			
	M	*SD*	*M*	*SD*	*t*(90)	*p*
Before policy introduction						
Language written test	5.45	0.98	6.44	1.13	–4.35	.001
Mathematics written test	4.08	0.87	5.07	0.72	–5.00	.001
Social science written test	4.97	0.96	5.59	0.68	–3.43	.001
Language teacher assessment	5.43	0.81	6.53	0.95	–5.83	.001
Mathematics teacher assessment	3.50	0.77	4.44	0.67	–5.81	.001
Social science teacher assessment	4.76	1.03	5.50	0.84	–3.55	.001
End of policy implementation						
Language written test	5.77	0.77	6.87	0.91	–6.19	.001
Mathematics written test	4.92	0.88	5.79	0.74	–3.25	.002
Social science written test	5.22	0.91	5.93	0.78	–3.13	.002
Language teacher assessment	5.82	0.91	6.75	0.88	–4.73	.001
Mathematics teacher assessment	4.60	0.91	5.48	0.82	–3.95	.001
Social science teacher assessment	5.35	1.00	6.13	0.83	–3.73	.001

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com

Among Those Present

ROBERT K. TOUTKOUSHIAN is an associate professor, Educational Leadership and Policy Studies, Indiana University, Bloomington. His work focuses on school finance and economic applications to education. **TAYLOR CURTIS** is a doctoral student, Department of Computer Science, University of California at Los Angeles. He is planning to focus on artificial intelligence.

BRUCE B. FREY is an assistant professor of educational psychology and research, University of Kansas, Lawrence. His research interests include classroom assessment, program evaluation methods, and cognitive spirituality. **STEVE W. LEE** is an associate professor and director of the school psychology program, University of Kansas. His research interests include anxiety in children and adolescents, classroom observation, and student assistance teams. **NONA TOLLEFSON** is a professor of educational psychology and research at the same university. She is interested in designing, implementing, and evaluating program, school, and district-level interventions for school-aged children. **LISA PASS** is completing her educational internship with Decatur City Schools in Alabama. She hopes to pursue her doctorate in school psychology, with a concentration in child clinical neurospsychology. **DONITA MASSENGILL** is an assistant professor in teaching and leadership at the same university. She focuses on word study, the handwriting–alphabet connection, and adult literacy.

LEONIDAS KYRIAKIDES is an assistant professor in educational evaluation, Department of Education, University of Cyprus, Nicosia. His research interests include the development of generic and differentiated models of educational effectiveness, evaluation of pupil progress, and the application of effectiveness research to improved educational practice.

JOE D. NICHOLS is a professor, School of Education, Indiana–Purdue University at Fort Wayne. He is currently chair of the Department of Educational Studies. His current research interests include applied educational research and program assessment.

SHU-SHEN SHIH is an assistant professor, The Center of Teacher Education, National Chengchi University, Taiwan. Her current interests are achievement motivation, children's thinking, and self-regulated learning.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission. www.manaraa.com