This study evaluated the Primary Learning Communities (PLC) program, a non-graded kindergarten through second-grade alternative curriculum piloted in three Houston, Texas, elementary schools. The curriculum allows a multi-age mixing of students with ages between five and seven years in the same classroom. Approximately 600 students and 27 teachers participated in the evaluation. PLC and non-PLC teachers were surveyed, and a random sample of PLC classrooms were visited to collect observational data. Survey data were analyzed with descriptive and qualitative procedures. Results indicated that the program's content, flexibility, and underpinning philosophy met the varied instructional needs of students through student activities which enhance each student's strengths, interests, successes, and motivation. PLC curriculum rated as more effective than the traditional curriculum in the development of math and reading skills, self-esteem, social skills, positive attitude toward school, and self-discipline. The study concluded with many recommendations proposed by the program staff for enhancing the effectiveness of the PLC program.
Implementation Challenges of the Primary Learning Communities Program: Precautions and Potential

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IMPLEMENTATION CHALLENGES OF THE PRIMARY LEARNING COMMUNITIES PROGRAM: PRECAUTIONS AND POTENTIAL*

Abstract

The Primary Learning Communities (PLC) program is a non-graded K-2 curriculum being piloted at three Houston ISD elementary schools. It is an alternative curriculum that allows a multi-age mixing of students with ages between 5-7 years in the same classroom. Preliminary findings of a formative evaluation that was conducted during the program's second year of implementation indicated that the PLC curriculum has many strengths, great potential, and is more effective than the traditional K-2 curriculum with regard to the development of reading skills, math skills, social skills, self-esteem, positive attitudes toward school, and self-discipline in K-2 students. However, observations of PLC staff indicated that the full realization of the project's potential depends upon the appreciation and resolution of many effectiveness constraints. Many recommendations were therefore proposed by the program staff for guiding current and future PLC program planners for enhancing the implementation effectiveness of such a non-traditional program.

Introduction

As the nation's educational leaders search for the root causes of low academic performance, high dropout rates, and high incidence of disciplinary problems at the secondary school level, many educators have began to point at the primary school curriculum, especially the K-2 curriculum, as the possible causative factor. This finger-pointing at the primary level curriculum has triggered a national scrutiny of the K-2 curriculum (Katz, Evangelou, and Hartman, 1990). Educational research on child development, curricula content, social changes, and the inefficiencies of traditional educational practices during the past two decades have revealed the need for fundamental changes in the curricula and instructional processes at the elementary school level. In the opinion of many educators, the instructional experiences of students at the primary level determine the extent to which students acquire the necessary attitudinal and academic foundations for success at the secondary school level. In a recent position statement by the National Association for the Education of Young Children (NAEYC), educators were reminded that:

The primary grades hold the potential for starting children on a course of lifelong learning. Whether schools achieve this potential for children is largely dependent on the degree to which teachers adopt principles of developmentally appropriate practice (NAEYC, 1988).
The Primary Learning Communities Program has been known variously as developmentally appropriate learning, multi-age, vertical, ungraded, non-graded, mixed-age, family grouping, or heterogeneous programs (TEA, 1991). The program is philosophically premised on the development of the whole child and reflects an understanding that children learn through active involvement in a variety of child-centered group settings. Such a process allows children to enjoy learning, be intrinsically motivated, and see themselves as capable and important participants in the teaching and learning process. The benefits of such a curriculum include: (a) the optimization of what can be learned by students of different ages and abilities when they are given the opportunity to interact; and (b) the exiting from the program when they are ready for entry into the traditional curriculum. Another merit is the facilitation of developmentally appropriate teaching activities that not only recognize the students' physical, social, emotional, aesthetic and cognitive development but also encourage: individualized learning, cooperative learning, peer tutoring, cross-age groupings, interest groupings, skill groupings, and integrated and thematic teaching practices. The teaching of such a curriculum takes optimum advantage of the child's natural abilities, interests, and enthusiasm for learning, while allowing the teacher to assume the role of a facilitator.

Such a non-graded curriculum differs from the traditional curriculum in several ways. First, the traditional curriculum enrolls students with generally one age per grade level, while the non-graded enrolls students whose birthdays span as many as three or four years. Furthermore, the traditional curriculum is characterized by rigid structures such as a perceived homogeneity of developmental levels and a promotion/retention theory which adversely affect many children. A central element of the traditional curriculum is the use of standardized test results as the sole justification for the rigid promotion, retention, tracking, and labeling practices. Such practices adversely affect the emotional, social, and cognitive development of primary level students. The use of chronological age as the sole basis for categorizing children into grades, regardless of the fact that developmental levels and accumulated life experiences within any of the lower grades could vary from 1-12 months, results in a mis-labeling of children who may be immature for a particular grade level. According to one educator's interpretation:

Some school boards refuse to assume the expense of an extra school year for children identified as needing something extra, so they label them learning handicapped, which makes the district eligible for additional state or federal funding. If young or immature children or children lacking the kind of experiences, especially language- and print-rich experiences, that correlate with school success, are called young or immature children, they are not eligible for special aid... If some children do not progress satisfactorily, it is assumed that the children have failed, rather than that the system has failed to meet their needs... the child is separated from the other children who move on. The child feels different from her classmates. At age 5 or 6 it does not help the self-concept (Connell, 1987).
As far back as 1976, the Association of Childhood Education (ACEI) called for a moratorium on standardized testing in the early years of school, because of the perceived detrimental effects of testing and some of its uses at that level. The National Association for the Education of Young Children also called for an end to K-2 testing in 1988. During this same year, the state of North Carolina ended all its standardized testing of its K-2 students. According to Professor Vito Perrone, a Senior Fellow at the Carnegie Foundation for the Advancement of Teaching, "testing is problematic at all grade levels, but particularly so in the primary grades, when a child's growth is most uneven and idiosyncratic." (Perrone, 1991). The emphasis placed on standardized tests compels teachers to spend precious time preparing children to take the tests (Perrone, 1991).

Even though reviews of past research literature (1948-1991) on multi-age groupings indicate a lack of consistent pattern of significant positive impacts on student learning, there seems to be consistent experience of positive social and affective impacts on students, especially the younger members of the class (Pratt, 1983, 1986; Way, 1981). In staying abreast of such pedagogical developments, the Primary Learning Communities Program was adopted in 1990-91 school year at Oak Forest, Pleasantville, and Whittier Elementary schools, through the collaborative initiative of the administrative district superintendent and the principals of the three schools.

**Description of Program**

Rather than have the traditional graded curriculum where 5 year olds are placed into kindergarten classrooms, 6 year olds are placed into first grade classrooms, and 7 year olds are placed into second grade classrooms, the PLC curriculum provides a classroom environment in which a combination of students with ages ranging between 5–7 are assigned to each classroom under one teacher or a team of teachers for 1–3 school years. Whittier Elementary had all of its K–2 students in the PLC program, while Oak Forest and Pleasantville maintained both the PLC classrooms side-by-side with the traditional K–2 classrooms, since some parents opted for the traditional curriculum for their children.

Overall, about 600 students participated in the PLC program during the 1991-92 school year. Approximate numbers of students for the respective PLC schools were: 220, Oak Forest Elementary; 110, Pleasantville Elementary; and 260, Whittier Elementary. Ten teachers participated in the program at Oak Forest, while 5 teachers and 12 teachers participated in the program at Pleasantville and Whittier respectively.

**Funding Source and Program Cost**

According to the program proposal, dated May 1, 1990, the cost of operating the PLC program during the first pilot year was $88,264. The amount included the costs of 8 inservice days for 28 PLC teachers, registration fees and materials for the McCracken workshop on Whole Language, consultant fees, and materials that were provided during
the 1990-91 school year. No funds nor materials were provided for the 1991-92 school year by the district besides the regular instructional materials of regular K–2 classrooms.

**Purpose of Evaluation**

The primary goals of this evaluation were: (a) determine the strengths and weaknesses of the program's implementation process, (b) assess the effectiveness of the program in achieving its goals, and (c) obtain recommendations from program staff for improving the program. Specifically, this evaluation answers the following questions:

1. What were the implementation characteristics of the PLC program at the three program schools?
2. What were the perceptions of the PLC teachers about the strengths of the PLC program?
3. What were the perceptions of the PLC teachers about the weaknesses of the PLC program?
4. What were teacher perceptions of differences in effectiveness between the PLC program and the traditional K-2 program?
5. What teacher characteristics would be ideal for ensuring an effective implementation of a non-graded K-2 program?
6. What were the recommendations of program personnel for refining the program?

**Methodology**

**Participants**

The entire K–2 teaching staff and students at the three program schools served as the target populations for the study. A total of 27 teachers and approximately 600 PLC students participated in the study.

**Data Collection and Analysis**

Two instruments were used to collect most of the data for this report. The instruments were: (a) PLC Teacher Survey (Appendix A), and (b) Non-PLC Teacher Survey (Appendix B). The PLC Teacher Survey & Non-PLC Teacher Survey were administered between the first and fourth weeks of April 1992. A random sample of PLC classrooms of the three schools were visited during the spring semester of 1992 by the researcher to collect observational data. All K–2 teachers at Oak Forest, Pleasantville, and Whittier elementary schools were surveyed with either the PLC Teacher Survey or the Non-PLC Teacher Survey. All the survey data were analyzed with descriptive/qualitative procedures.
Results

QUESTION 1. What were the implementation characteristics of the PLC program at the three program schools?

Teacher Characteristics

The following were the proportions of the PLC teaching staff who responded to the PLC Teacher Survey: 100%, Oak Forest; 58%, Whittier; and 80%, Pleasantville. Table 1.1 shows: (a) the overall years of teaching experience, and (b) years of K-2 teaching experience of the responding teachers whose observations form the crux of this report.

<table>
<thead>
<tr>
<th>School</th>
<th>Years of Teaching Experience</th>
<th>Prior K-2 Teaching Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-3</td>
<td>4-6</td>
</tr>
<tr>
<td>Oak Forest</td>
<td>27%</td>
<td>9%</td>
</tr>
<tr>
<td>Pleasantville</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Whittier</td>
<td>57%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Classroom Environment

Each of the PLC classrooms was divided into sections for a variety of activities and purposes such as cluster sitting arrangement, learning centers, and open spaces to facilitate easy movement within the classroom. Student desks were therefore not in rigid traditional rows as one would expect in a traditional classroom.

Curriculum Objectives: Essential Elements

Even though the PLC program is a K-2 alternative curriculum, it addressed the same curriculum objectives or essential elements being addressed by HISD's traditional K-2 curriculum. What made the PLC program different were therefore not the instructional goals and objectives but the process by which the prescribed instructional goals and objectives were addressed. When the PLC teachers were asked to identify any prescribed essential elements/instructional objectives that could not be addressed by the PLC's instructional framework, 100% of the PLC teachers at all the three PLC schools indicated that there was none that could not fit nor be addressed by the PLC's instructional process.
Teaching Methods/Activities

Observations of the PLC classrooms, as well as survey responses concerning daily PLC activities that occurred within the various instructional time blocks, illustrated the thematic, student-centered, and process centered nature of the instructional activities. Within such instructional framework, PLC teachers appeared to be monitors, observers, and guides of instruction, as they encouraged learning through play, hands-on activities, discovery learning, peer group activities, mixed-age tutoring, student initiated learning, and other small group activities.

Teaching Load

An attempt was made to compare the PLC teacher work load to that of the traditional curriculum. PLC teachers were asked to estimate the number of hours they spent during a typical week on lesson preparation: (a) when they used to teach in the traditional K–2 classrooms; and (b) in the PLC program during the 1991-92 school year. Only the responses of 16 teachers who had previously taught at the K–2 level prior to their participation in the PLC program were incorporated into the estimates. Overall, the teachers indicated that they used to spend an average of 8 hours weekly on lesson preparation activities prior to their participation in the PLC program. However, during the 1991-92 school year they spent an average of 14 hours weekly on lesson preparation activities. In effect, the amount of time the PLC teachers spent on lesson preparation during the 1991-92 school year represented a 75% increase over what they had been used to in the traditional classroom.

Student Assessment Methods

In conformity with the unique characteristics of the program, teacher assessments of student progress were comprehensive and used multiple data sources. Assessment procedures and sources included portfolios, journals, teacher observations, samples of student work, how well students work independently or in groups, participation in group discussions, listening skills, reading checklist, anecdotal records, McCracken Spelling Checklist, hands-on familiarity with manipulatives, Math Their Way, oral and written tests, daily contracts, and self portraits.

Exiting Students from Program

As prescribed by advocates of the non-graded curriculum, the PLC teachers indicated that students’ overall academic and socio-psychological readiness for the third grade curriculum, rather than age, determined the exiting of students from the program. However, one teacher indicated that a student who was not eligible for special education could be promoted to third grade, regardless of readiness, if he or she had been previously retained.
QUESTION 2. What were the perceptions of the PLC teachers about the strengths of the program?

Feedback from the PLC teachers about the strengths of the project provided a reinforcing validation of the positive characteristics of the mixed-age curriculum. The teachers emphasized that the program strengths that emerged during the implementation included the following:

- the effectiveness of the program through hands-on-activities and varied levels of materials and teaching methods that combined to boost student enthusiasm for learning;

- the enhancement of student's self-confidence, capacity for sharing, and working relationships with others;

- the opportunity for the teacher and the student to work together, in celebrating each child's successes and strengths in a less restrictive but challenging environment;

- the fact that the students stay with the teacher for three years provides the teacher the opportunity to know the strengths, weaknesses, interests, and learning styles of each student. Such knowledge makes it possible for the teacher to meet the individual needs of each student;

- the opportunities for inter-age challenge, mentoring, support, friendships, leadership, peer and cross-age tutoring. The stimulating nature of the environment facilitates the development of the students' higher-order thinking skills.

- the project's ability to pull teachers together as a team to work for the benefit of students;

- the project's capacity for facilitating parental involvement was also cited by one Oak Forest teacher with the following comments: "They [students] share their strengths with each other and are not afraid to ask a peer for help. They love school and they have their parents involved constantly by asking them to listen to them read, buy them books, take them to the library for science related books that they can bring to class and share. They actually tell them what they learned in school each day."

- Many of the teachers mentioned that even though the program had positive impacts on all the age groups in their classes, it was their perception that the 5 year olds, kindergartners, benefitted most from the program.
QUESTION 3. What were the perceptions of the PLC teachers about the weaknesses of the PLC program?

Twenty-four percent of the PLC teachers who responded to the survey indicated that they did not participate in the PLC staff training activities, while 33% indicated that the staff training activities of the initial year were inadequate in preparing them for the effective implementation of the program. Furthermore, 67% of the PLC teachers indicated that the provision of appropriate instructional materials by the district was slightly or considerably inadequate. The following program weaknesses were also identified by the PLC teachers at the respective schools.

Oak Forest Elementary School

- Lack of teacher aides or support staff compelled PLC teachers to use much valuable planning time for cutting, pasting and copying instructional materials.

- Excessive amount of time was used for planning and preparing instructional materials.

- Lack of adequate district support in the form of books, literature in science, and other PLC supplies led to the use of personal funds for purchasing relevant books and materials. The teachers emphasized that the principal's emotional support and instructional leadership were very strong and appreciated.

- Inherent weaknesses or problems in mixed-age classrooms were the class management and disciplinary problems that confronted teachers.

- There seemed to be an excessive number and levels of student skills in each class.

- The practice of pulling out PLC students for the vanguard program robbed the program of its best students.

- Lack of financial compensation for the extra planning and preparation of teacher-made materials was seen as a program weakness.

- The time to prepare and be familiar with the new PLC materials, resources, and curriculum was inadequate.

- Several students initially had low levels of listening and reading skills, as well as difficulty in shifting from relatively higher noise levels to quiet times in the classroom.
Pleasantville Elementary School

- The district's material support of the program was seen as inadequate. As a result, one of the teachers mentioned spending $400, while another spent about $1,000 of her own personal funds, on instructional materials.
- Negative comments of other teachers about the program undermined the effort.
- The district's emphasis on test scores and the pulling out of the PLC's seven-year-olds for TAAS preparation instruction from 8:00 a.m. to 12:00 p.m. reduced the benefits of the program to the 2nd grades. The emphasis on test scores also appeared to have forced some teachers to stick to the old and "proven" instructional methods.
- PLC classes were too large for the program to work effectively.
- Two teachers indicated that since the PLC program seemed to be unsuitable for some students, especially those with disciplinary problems, the lack of an opportunity for their placement in a more structured traditional curriculum, adversely affected program effectiveness.

Whittier Elementary School

- The reluctance of some teachers to change from the traditional curriculum to the prescriptions of the PLC curriculum undermined the program.
- Many parents were ignorant about the benefits of the PLC program.
- One teacher perceived the PLC curriculum to have an adverse effect on kindergartners, who were being pushed too early into hearing concepts that were too confusing to them.
- It was indicated that there was inadequate preparation in class management techniques for dealing with the disciplinary problems of students who were not appropriate for or not benefitting from the PLC program.
- There were uneven numbers of students at the three age levels in each classroom. According to one teacher, "Older children seem to regress developmentally if they are the minority of the class."
- There was a lack of appropriate PLC instructional materials.
QUESTION 4. What were teacher perceptions of differences in effectiveness between the PLC program and the traditional K-2 program?

Since standardized test scores for PLC students and a control group of students in the traditional curriculum were not available, rigorous statistical analysis of program effectiveness could not be conducted. As an alternative measure of program effectiveness, teachers with K-2 teaching experience prior to their participation in the PLC program were asked to compare the effectiveness of the PLC curriculum to the traditional graded curriculum, on the basis of their PLC experiences during the two years of program implementation. Sixteen former K-2 teachers, out of twenty-seven PLC teachers, provided their assessment for this segment of the evaluation.

Figures 5.1–5.3 compare the two curricula, in light of how each of the two facilitates the effective attainment of some of the major instructional goals of the lower primary curriculum. In the following figures, the instructional activities of K-2 students of the traditional curriculum are compared to the corresponding instructional activities of 5–7 year old students of the PLC curriculum.

**Figure 5.1 Extent of PLC Curriculum Effectiveness in Relation to the Traditional Curriculum: Student Self-Esteem and Student Conduct**

**Self-Esteem/Self-Confidence**

- As shown in Figure 5.2, 94% of the former K–2 teachers indicated that the PLC curriculum was more effective in enhancing students' self-esteem or self-confidence than the traditional curriculum. Indeed, 75% of the teachers regarded the difference in effectiveness between the two curricula as considerable.
Self-Discipline/Conduct

- As shown in Figure 5.1, between 50% and 56% of the former K–2 teachers regarded the PLC curriculum as more effective, while 31–37% of the former K–2 teachers regarded the Traditional curriculum as more effective in facilitating self-discipline or good conduct among the students.

- Of all the instructional goal areas addressed by Figures 5.1–5.3, student discipline or conduct seems to be the area in which the PLC curriculum was least effective in out performing the traditional curriculum.

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Figure 5.2 Extent of PLC Curriculum Effectiveness in Relation to the Traditional Curriculum: Students' Social Skills and Attitude Toward School

Social Skills

- As shown in Figure 5.2, 82% of the former K–2 teachers indicated that the PLC curriculum was more effective than the traditional curriculum with regards to the acquisition of social skills by students.

Positive Attitude Toward School

- Of all the instructional goal areas addressed by Figures 5.1–5.3, student attitude toward school seems to be the area in which the PLC curriculum was most effective in out performing the traditional curriculum.

- 75–81% of the teachers believed that the PLC curriculum was considerably more effective than the traditional curriculum in engendering in K–2 students a positive attitude toward school.
Reading Skills

- As shown in Figure 5.3, between 56% and 69% of the former K–2 teachers indicated that the PLC curriculum was more effective than the traditional curriculum in enhancing the reading skills of K–2 students, while 19–31% indicated that the traditional curriculum was more effective in enhancing the reading skills of K–2 students.

- When the proportions of teachers who rated the PLC curriculum as considerably more effective than the traditional curriculum are considered, it becomes apparent that as much as 50% of the former K–2 teachers, rated the PLC curriculum as considerably more effective than the traditional curriculum in improving the reading skills of the 5 year old students. In the words of one Pleasantville teacher who spent more than $400 of her personal funds on materials, "This program is great for kindergartners. I've seen them take off. I have eight, five of whom are good readers." Furthermore, between 25% and 31% of the former K–2 teachers rated the PLC curriculum as considerably more effective than the traditional curriculum in improving the reading skills of the 6 and 7 year old students.

Math Skills

- Figure 5.3 indicates that a great majority of the former K–2 teachers rated the PLC curriculum as more effective than the traditional curriculum in facilitating the development of math skills in K-2 students.

- Eighty two percent of the former K–2 teachers rated the PLC curriculum as more effective than the traditional curriculum in the development of math skills in the 7 year old students, while between 88% and 94% believed that the PLC program was more effective in math skills instruction among the 5 and 6 year old students.
General Comments

The following are examples of some general comments that were made by the former K–2 teachers in response to a question in the PLC Teacher Survey that asked the teachers if they had "at this early phase of program implementation, personally observed any positive academic or behavioral changes" among their students that were "generally not typical of kindergartners, first graders, or second graders in the traditional curriculum."

- I have kinders who can give you place value up to 1,000, tell you the difference between odd and even and read at a first grade level. I also have second graders who came in slow but now have more self confidence. The first kinders have been the greatest benefactors of the program. There seems to be no limit to where they can go. (Pleasantville Teacher)

- K's are using increased vocabulary and showing academic skills not typical of K's. First and second graders have both met and surpassed the essential elements for their grades. K's behavior is also more mature than a typical class of all K's. (Whittier Teacher)

- The most positive effect, in my opinion, is the children's ability to work cooperatively with each other. I see less competition among students and a greater sense of oneness. These children are not afraid to take risks or to tackle a difficult problem. Self-esteem and self-confidence are high. (Oak Forest Teacher)

- Yes! They have a true love of learning. They are enthusiastic and excited about school. They are all excelling in reading, writing, math, science, and social studies. They have gone far beyond the limits of a traditional K, 1 or 2 class. Even the slow learners are showing great progress because they experience success every day! (Whittier Teacher)

- Yes, we have a Kindergarten student who is reading on a 3rd grade level and writing. He is able to excel in this classroom and is able to be challenged. We also have a few second graders who were very slow at the beginning of the year and thought they wouldn't go on, but since they were able to progress at their own rate and feel good about the accomplishments they were making they are now ready for third grade. (Oak Forest Teacher)

- Just from September I have noticed an increase in participation, a willingness to share work as well as an overall increase in self esteem. Students are doing research, division and other skills that normally are not implemented until reaching the upper grades. (Whittier Teacher)

- The children are very verbal and have opinions about everything. The students seem more confident about tackling difficult tasks although they do not choose to do those tasks on their own. The tasks must be assigned. (Oak Forest Teacher)
QUESTION 6. What teacher characteristics would be ideal for ensuring an effective implementation of a non-graded K–2 program?

Since the PLC program is a pilot, with the potential for expansion or replication, coupled with the pivotal role teachers play in most instructional programs, the PLC teachers were asked to reflect on the challenges inherent in the PLC program and identify the ideal teacher for such a program. The following is a summary of their responses.

Creativity and Open-Mindedness

Almost all the teachers mentioned that the ideal teacher should be creative, open-minded, and flexible about teaching strategies and methods. According to one Oak Forest teacher: "Creativity is also necessary because 90% of the material is teacher created/teacher made." Several teachers expressed that the ideal teacher is the one who can "let go" of the traditional instructional framework, accept the philosophy and instructional framework of the mixed-age program, be adventurous in trying new approaches, willing to give the new approaches a chance to work before abandoning them, and have the temperament to cope with failure when an instructional approach proves ineffective.

Experience and Training

Most of the teachers indicated that the challenges and demands of the PLC program make it imperative that experienced teachers with thorough knowledge of the curriculum and classroom management would be ideal for such a program. In the words of one Oaks Forest teacher: "I feel that because of the tremendous time demands of the program, it is for the experienced teacher only. You need a wealth of previously used classroom management tactics to draw from as well as previously developed units or themes that can be revised and extended". Several teachers emphasized that K-2 teaching experience, early childhood specialization, training in whole language and learning centers, alternative assessment systems, or developmentally appropriate practices, would be invaluable.

General Attitude and Diligence

Several PLC teachers, indicated that the emotional demands of the mixed-age program requires that the ideal teacher be patient and confident. One teacher indicated that there is such a wide variety in the attitudes and behaviors among the three age groups that it is only with much patience and positive attitude that one can successfully understand and help the students. Many emphasized that the ideal teacher should enjoy working with K–2 children, be able to trust and respect them, as well as tolerate considerable movement and relatively higher noise levels in the classroom. Several teachers expressed that the ideal teacher has to be professionally dedicated to the welfare of the students, committed to the tenets of the mixed-age philosophy, and able and willing to work long hours in preparing units and hands-on materials.
QUESTION 7. What are the recommendations of program personnel for refining the program?

Hire Teacher Aides

The consensus among the teachers was that the PLC work load was so excessive that it is important that they get some hired help. The teachers recommended that such support staff could act as resource persons for each campus in coordinating materials, information on which teachers have what materials, which literature supports various science themes, field trips, special events, assist in the classroom, and coordinate PLC-related volunteer help. One teacher mentioned that if the class sizes are not reduced, the district should provide one teacher aide for every two PLC teachers. The need for more staff help was the most mentioned recommendation.

Staff Training

Most of the teachers requested that more staff training activities should be provided on the multi-age curriculum. Specific areas that were most mentioned by teachers of the three schools included the following: how to set up PLC classrooms, K-2 content area instruction, early childhood development, planning units, alternative assessments such as portfolios, whole language, classroom management techniques, discipline management, manipulatives, checklists, hands-on math and science for multi-age groups, Math Their Way, AIMS, writing, learning centers, and how to deal with the emotionally disturbed.

Smaller Class Sizes

Several suggested that their class sizes should be reduced to help ensure that each PLC students receive adequate developmentally appropriate instruction. In the opinion of the teachers, a class size of 22 students is much too big for the kind of instruction befitting the mixed-age curriculum.

More PLC Instructional materials

Most of the teachers recommended that more materials should be purchased for the program. Such materials should include math and science manipulatives, books, bilingual version of PLC materials and books, and other PLC curriculum materials.

Provide PLC and Traditional Curriculum

It was recommended by teachers at Whittier and Pleasantville elementary schools that parents should be given the opportunity to choose either the PLC or the traditional curriculum for their children. One PLC teacher mentioned that since the PLC program may not be appropriate for every child, it would be ideal if students whose developmental needs require more structure can be assigned to a traditional curriculum.
More Funds

Many teachers recommended that the district provides more funds for the purchase of materials. One of the teachers mentioned that such funds should also be accessible through a quick reimbursement process rather than the traditional cumbersome process that "takes for ever" for materials to arrive.

Two grades Only

Three teachers, one from each of the three PLC schools, mentioned that the present three age levels comprising the PLC classes should be limited to only two age levels in order to strengthen the effectiveness of program.

Extra Stipends for PLC Teachers

Several teachers suggested that extra stipends should be given to PLC teachers because of the extra demands of the program, especially the extra time they put into the planning and preparation of materials for PLC instruction.

Extra Time for PLC Teachers

Several teachers at Oak Forest indicated a need for additional time for planning, preparation of materials, and getting together periodically to keep one another abreast of each others experiences, problems, and successes.

More Cooperation from Ancillary Teachers

The Oak Forest PLC teachers suggested that the physical education, library, and computer ancillary teachers should adopt the PLC philosophy by providing services for whole classes without resorting to the age-sorting framework that not only undermines the PLC philosophy but also creates extra scheduling problems.

Computers in PLC Classrooms

More than 50% of Oak Forest teachers recommended the placement of computers in the PLC classrooms for use by students.

Other PLC Teacher Recommendations

The following recommendations were also made by the Oak Forest teachers: the enhancement of the reputation of the PLC program in order to prevent parent-initiated transfers of PLC's best students to the vanguard program; and the installation of utility sinks in or close to PLC classrooms.
DISCUSSION

Overall, this diagnostic review of PLC's first two years of implementation has revealed the strengths and great potential of the mixed-age curriculum as an effective alternative for addressing the instructional needs of K-2 students. The program's content, flexibility, and underpinning philosophy seem to meet the varied instructional needs of K-2 students through many student centered activities, which facilitate the celebration and enhancement of each student's strengths, interests, successes, and motivation for learning. A comparison of the PLC curriculum's effectiveness to that of the traditional K-2 curriculum has indicated that the PLC curriculum is relatively more effective. Whether in the development of reading skills, math skills, social skills, self-esteem, positive attitude toward school, or self-discipline among K-2 students, the PLC curriculum was rated as more effective than the traditional curriculum. These preliminary findings of program effectiveness reinforce the recent study findings of Roberto Gutierrez and Robert Slavin of John Hopkins University's Center for Research on Effective Schooling for Disadvantaged Students. Gutierrez and Slavin's review of studies of non-graded programs reported from the late 1950s, 1960s and 1980s, indicated "consistent significant positive results favoring the nongraded programs" (Gutierrez and Slavin, July 1992; Winter 1992).

The study has also revealed that the PLC program had many demands and challenges that need to be addressed in order to optimize the realization of its great potential. Within the context of the three PLC schools, several program implementation weaknesses were identified through this 1991-92 formative evaluation. The unique demands of the PLC program on the teacher's time, class management skills, instructional skills, motivation, family life, and personal funds, make it important that district and/or alternate sources of support are sought to help address pertinent program implementation weaknesses and recommendations contained in this report. Continuing building level support and the development of collaborative frameworks for addressing the identified program weaknesses and recommendations, as well as other future problems, will be required as the program evolves and matures to become a model for other schools within and outside the district.

This evaluation further provides insights into the content, challenges, ideal teacher characteristics, staff training topics, and pertinent resource requirements that will be needed by other schools with interest in replicating the PLC curriculum without going through the frustrations and impediments that this two year old PLC program has experienced.
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