DOCUMENT RESUME

ED 456 532 EA 031 222

AUTHOR	Reichardt, Robert
TITLE	Reducing Class Size: Choices and Consequences. Policy Brief.
INSTITUTION	Mid-Continent Research for Education and Learning, Aurora, CO.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	2001-04-00
NOTE	9p.
CONTRACT	ED01CO006
AVAILABLE FROM	Mid-continent Research for Education and Learning, 2550 South Parker Road, Suite 500, Aurora, CO 80014. Tel: 303-337-0990; Fax: 303-337-3005; Web site: http://www.mcrel.org.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Academic Achievement; *Class Size; *Educational Assessment; Educational Experiments; Primary Education; *Student Improvement
IDENTIFIERS	California; Tennessee; Wisconsin

ABSTRACT

This policy brief draws on research and evaluations of efforts in Tennessee, California, and Wisconsin to describe different approaches to reducing class size in kindergarten through third grade. Tennessee implemented a randomized experiment to investigate the effectiveness of smaller classes; California used a statewide approach; and Wisconsin targeted class-size reduction as part of an effort to increase achievement in high-poverty schools. Tennessee's STAR program provides the strongest evidence that smaller class sizes improve student performance. California's experiment showed much smaller improvements in student achievement compared with Tennessee's. Wisconsin's SAGE program produced larger increases in achievement in mathematics and language arts than California obtained, but less than were found in Tennessee. Evidence from these states provides guidance for policymakers about whether and how to implement a class-size-reduction program. The brief considers questions such as: What makes small classes more effective? How small is small and for how long? and How much does it cost to reduce class size? Other topics include key cost considerations, funding and fiscal equity, long-term costs, finding teachers for additional classrooms, finding additional classroom space, and crafting class size to meet education needs. The brief concludes with a list of nine resources. (RT)

McREL

POLICY brief

April 2001

Reducing Class Size: Choices and Consequences

by Robert Reichardt, Ph.D., policy researcher

Key Points

- ***Smaller classes can raise student achievement and help narrow the achievement gap between minority and non-minority students.***
- ***Reducing class size is costly — and more so for small schools.***
- ***Giving districts and schools flexibility in how class size is measured can lower costs.***
- ***Additional qualified teachers and classroom space are critical planning considerations.***
- ***A large-scale initiative to reduce class size should include strategies for retaining qualified teachers in schools that serve high proportions of at-risk students.***
- ***Class size reduction should be considered as part of a larger systemic approach to raising student achievement.***

Class size reduction provides policy makers with a direct lever for influencing the classroom. Few policies offer such immediate, concrete effects. Some recent state-level programs have found that smaller class sizes produced increases in student achievement, especially for minority students.

Reducing class size is also a popular idea with the general public. A 1998 Gallup poll found that 80 percent of adults favor the use of federal funds to reduce class size in grades one through three. In addition, the Education Commission of the States reports that class size reduction legislation was passed in 13 states between 1998 and 2000.

Does Reducing Class Size Raise Student Achievement?

There is a sizeable body of research into the relationship between smaller classes and student achievement. Recently, the Economic Policy Institute (2000) asked economists to review this research. They came to different conclusions about how to evaluate the effectiveness of class size reduction programs and whether significantly reducing class size helps raise student achievement. Nonetheless, the literature and efforts by states provide valuable information for policy makers.

This policy brief draws on research and evaluations of efforts in three states to describe different approaches to reducing class size in kindergarten through third grade. Tennessee implemented a randomized experiment to investigate the effectiveness of smaller classes; California used a statewide approach; and Wisconsin targeted class size reduction as part of an effort to increase achievement in high-poverty schools. Evidence from these states and other studies provides guidance for policy makers about whether and how to implement a class size reduction program.

Tennessee's STAR Experiment Shows Early and Long-Term Gains

The strongest evidence that smaller class sizes improve student performance comes from Tennessee. In a rare event for education research, Tennessee state

legislators authorized an experiment called Student-Teacher Achievement Ratio (STAR). Between 1985 and 1988, kindergarten through third-grade students were randomly assigned to smaller classes (13-17 students), regular classes (22-26 students), and regular classes with an aide.

A critical finding from Tennessee's STAR program was [that] test scores of minority students improved more than those of non-minority students, narrowing the performance gap.

Word and her colleagues (1990), in a research study of STAR, found that students in the small classes significantly outperformed students in regular classes on standardized reading and mathematics tests. No difference in performance was found between regular classes and classes with aides. Subsequent studies found that students from the smaller classes continued to outperform students from the regular-size classes on achievement tests through middle school, with some indication of improved performance and behavior through high school. A critical finding from Tennessee's STAR program was the effect of smaller classes on minority students. Test scores of minority students improved more than those of non-minority students, narrowing the performance gap between these two groups. Following the Tennessee experiment, other states began to lower class sizes, using different strategies to address different policy problems.

California's Statewide Approach Shows Small Improvements in Test Scores

California's class size reduction policy was in part a response to the state's fourth-grade reading scores on the 1994 National Assessment of Educational Progress, which were among the lowest in the nation. The state also had a relatively large average class size of about 30 students. The policy was formulated to address both problems.

Stecher and Bohrnstedt's (2000) evaluation of California's policy found that the state's efforts were associated with small improvements in student achievement in language arts and mathematics. The evaluators estimated that on the SAT-9 achievement tests used in California, reducing class size increased the percentage of third graders who scored above the 50th percentile by 0.6 to 3.0 percentage points — a statistically significant change.

The improvements found in California were much smaller than those found in the Tennessee STAR experiment. In addition, the performance gap between minority and non-minority students did not narrow — improvements in the test scores of minority students were the same as those of non-minority students. The smaller effect in California may have been due to the fact that California's reduced class size of 20 students was closer in size to many of the regular-size classrooms in the STAR experiment. Major problems arose during California's implementation around the lack of certified teachers and appropriate classroom space. These problems may also account for the fact that California's approach did not reduce the test gap between minority and non-minority students.

Wisconsin's Targeted Approach Improves Poor Students' Test Scores

Molnar and his colleagues' (2000) evaluation of the Wisconsin program found larger increases in student achievement in mathematics and language arts than in California, but less than were found in Tennessee. The Wisconsin program, called SAGE for Student Achievement Guarantee in Education, is targeted toward districts and schools with high concentrations of poor students. SAGE schools volunteer to participate, agree to an achievement guarantee, and implement a four-component program. Central to SAGE are classes of 15 students in kindergarten through third grade for some or all of the day. In schools that have reduced class size for only part of the day, smaller classes are used for core subjects (reading, language arts, and mathematics). As was found in Tennessee, gains in minority students' test scores were larger than gains for non-minority students, narrowing the achievement gap.

What Makes Small Classes More Effective?

What is it about small classes that leads to increased achievement, particularly of minority students? Policy makers and researchers are asking whether smaller classes are more effective primarily because they are smaller, or whether students and teachers are doing something different in smaller classes that better supports learning. Research is beginning to shed light on what practices may be occurring in smaller classes that lead to improved student achievement. As the debate over the effectiveness of small classes is not completely resolved, answers about what makes smaller classes effective are tentative.

Teachers with fewer children in a classroom have more time to spend with each child, and in some small classes, teachers spend more time with children who are struggling. Classroom management is often reported as less challenging for teachers of small classes; thus, teachers can spend more time teaching. This additional teaching time may enable teachers to cover more material, either by going deeper into a given subject or by covering more subjects. Some research suggests that students are more engaged in smaller classes and less likely to drift away from lessons or disrupt others who are completing academic tasks.

The evaluation of Wisconsin's SAGE program compared first-grade teachers and classrooms that produced large gains in student achievement with teachers and classrooms where gains in student achievement were smaller. Differences in instructional goals and methods, management, and individualization were found. First, more effective teachers had comprehensive goals (focusing on students' personal and academic development), which were met through a variety of instructional methods. Second, more effective teachers managed students and lessons using clear instructions, appropriate tasks, and lessons that progressed logically. As a result, students were more engaged in academic pursuits. Third, by skillfully managing their classrooms, high-performing teachers had time to individualize lessons, which involved monitoring students' understanding and skill, offering feedback, and re-teaching when necessary.

Most teachers in smaller classes do not automatically individualize their lessons, change their teaching methods, or teach different content than they might in larger classes. Class size reduction programs should include training for teachers in effective classroom practices to maximize the benefits of smaller classes.

How Small Is Small and For How Long?

In 1979, Glass and Smith used meta-analysis to review all major studies of the effects of class size on achievement. They concluded that the optimum class size is less than 15 and that the effects are greatest for children under 12 years of age. These findings set the stage for future research and for the development of class size reduction programs. Results from Tennessee, California, and Wisconsin are based on class sizes ranging from 13 to 20 students. Evaluations of these programs and other research have not provided clear answers to questions about the optimum class size for all students or for students of various ability levels or academic skills.

Students who enter school with less well-developed academic skills, attitudes, and behavior may benefit more from smaller class sizes, while larger classes may be appropriate for students who are able to focus on academic tasks with little or no support from a teacher.

Small classes of low-achieving students have been characterized as functioning like larger classes with high-achieving students. In classrooms with high-achieving students, teachers manage less, assign more homework, ask more probing questions, and allow more time between questions and answers, which gives students time to think longer before answering questions. Students who enter school with less well-developed academic skills, attitudes, and behavior may benefit more from smaller class sizes, while larger classes may be appropriate for students who are

able to focus on academic tasks with little or no support from a teacher. Thus, if the primary reason that student achievement improves in smaller classes is that smaller classes increase students' academic behavior and focus, then optimum class size may depend on students' self-management skills.

There are two competing arguments about what students learn in small classes and, thus, about the importance of class size in different grades. One argument holds that smaller class size is only important in the earliest years of education as students learn the skills necessary for success in school. Another holds that students simply learn more in smaller classes so each additional year in smaller classes gives these students a boost in knowledge.

Analysis of the STAR data has produced findings that support both arguments. Early analysis of the STAR experiment suggested that most of the gains in student test scores occurred in kindergarten and first grade, which supports the learning skills argument. A later reanalysis of the data by Finn and Achilles (1999) suggested that student gains occurred in each year that students were in smaller classes — in this case, kindergarten through third grade. Both arguments support using smaller classes in the early years of a student's education. But current evidence does not resolve the question of which years and how many years students should spend in smaller classes.

How Much Does It Cost to Reduce Class Size?

The cost of reducing class size includes the cost of additional teachers, aides, materials, and classroom space. The range of cost estimates is large, from just under $200 per student to over $850 per student (in 1998 dollars). Based on the U.S. Department of Education's *Digest of Education Statistics* (1999), this range represents 3-13 percent of the average expenditure per student in 1997-98. Differences in the factors that influence the cost to reduce class size make estimating the total cost complex.[1] However, in general, factors that cause the cost to vary across districts and states include differences in

- teacher salaries;
- the availability and cost of additional classrooms;
- the size of the reduction;
- how funding to districts is determined; and
- enrollment in grades to be reduced.

Key Cost Considerations: Fiscal Equity, Flexibility, and Long-Term Costs

Even though factors at the state and local level ultimately determine the cost of reducing class size, policy makers have important choices about how funding is structured. Research and evaluations of class size reduction efforts

Small Schools and Higher Costs

Imagine two schools, School A with 90 students and School B with 180 students in kindergarten through 3rd grade. Both schools have an average class size of 22.5 students, and both schools use mixed-grade classes to ensure that classes are similarly sized. School A's 90 students are in 4 classes, one class at each grade level. School B's 180 students make up 8 classes, two at each grade level.

If state policy requires them to reduce class size to no more than 20, each school will have to add at least one classroom to reach the class size goal:

School A:
90÷4 = 22.5
90÷5 = 18

School B:
180÷8 = 22.5
180÷9 = 20

For School A, the smaller school, the cost per student of the additional classroom will be higher since costs have to be spread over fewer students (90 vs. 180). A good rule of thumb is that costs are 10% higher for schools with fewer than 100 students sitting in smaller classes.

[1] For a detailed discussion of how these factors interact and for some rules of thumb for estimating class size reduction costs, see Reichardt's *The Cost of Class Size Reduction: Advice for Policy Makers (2000)*.

Funding Strategies and Fiscal Equity: An Example

Consider Districts A and B, which have the same number of students and schools, and the same salaries for teachers of similar quality, but different class sizes — 26 in District A, 24 in District B. A state policy requires districts to reduce average class size to 20.

Based on recent estimates, District A will have to spend $595 per pupil to reduce to 20, District B, $435.

Assume that both districts have the same initial per-pupil revenue — say, $7,000. A policy that provides funding equal to each district's cost to create smaller classes would be less equitable for District B, which would receive $160 per student less than District A. District B would essentially be penalized for using its resources to create smaller classes before the statewide policy went into effect. In this case, flat funding — for example, $500 per pupil — would be more equitable.

Initial Per-Pupil Revenue	*Additional Per-Pupil State Funding*	
	Flat - $500	*Equals Cost to Reduce*
Dist. A - $7,000	*$7,500*	*$7,595*
Dist. B - $7,000	*$7,500*	*$7,435*
Dist. A - $6,000	*$6,500*	*$6,595*
Dist. B - $7,000	*$7,500*	*$7,435*

However, if Districts A and B have different average class sizes because they started with very different per-pupil revenue — $6,000 vs. $7,000 — then funding a flat amount per student will maintain the fiscal inequity between the districts. But paying Districts A and B the cost to reduce class size will decrease the fiscal inequity between the districts by $160 per student.

highlight three key considerations: initial fiscal disparities, flexibility in the funding formula, and long-term costs. These considerations are most important in statewide initiatives to reduce class size.

Funding and Fiscal Equity

A key decision for policy makers is whether state funding for a class size reduction initiative will match district costs to reduce the size of classes. This question has important equity ramifications. Equity is defined here as the degree to which the total revenue per student each district receives is equal.

Districts that have larger average class sizes will have to spend more than those with smaller class sizes to reduce class size to the same number. Flat funding — giving all districts the same amount per student — is fiscally neutral in states that have relatively equal revenue for all districts as well as little diversity in the other factors that affect cost (e.g., new teacher salaries, enrollment, available classroom space). This is true when districts have equal revenues but different average class sizes since these differences are caused by different choices about how to allocate revenue. But if districts have unequal revenue or large differences in cost factors such as teacher salaries or available classroom space, then paying districts the same amount can maintain or increase fiscal disparities between districts. (See sidebar.)

Flexibility in the Funding Formula

A key lesson from research and from California's experience is that the cost to reduce class size is influenced by the definition of class size — for example, whether class size is set as a maximum for a class or as an average for a school or district.

To illustrate, consider the California funding formula, which only paid districts for classes that had 20 or fewer students. In 1996-97, districts were paid $650 for each child that sat in a classroom with 20 or fewer students; in later years, this funding grew to about $800 per child. Twenty was the maximum class size — if a class had more than 20 students, the district lost state class size reduction funding for all of the students in that class. Some schools used mixed-grade classrooms to reach this goal.

An early evaluation of the state's class size reduction efforts by the California Legislative Analyst's Office found that the lack of flexibility raised implementation costs by 21 percent. Thus, the Legislative Analyst's Office recommended that *average* class size remain at 20, but that no *individual* class be larger than 22. (However, this recommendation was not adopted.)

Smaller Classes Can Result in Less Qualified Teachers in High-Needs Schools

An unintended consequence of California's class size reduction program has been a significant decrease in teacher qualification levels (i.e., education, experience, and proportion of certified teachers) in all elementary grades. More important, the unqualified teachers have been concentrated in schools with the greatest proportion of at-risk (e.g., poor, minority, or limited English proficient) students.

Prior to the state's class size reduction initiative, less than 3% of K–3 teachers were uncertified in schools with the highest proportion of poor students; less than 1% were uncertified in schools with the smallest proportion of poor students. After three years of implementation, these numbers grew to 21% and 4%, respectively. Not all of this change was due to the statewide effort to reduce class size. Part of it was caused by the booming economy that created many higher paying opportunities outside of education.

Nonetheless, the state's program created many new teaching positions. Many vacancies at schools with fewer minority students were filled by experienced, certified teachers who transferred from schools with many minority students. The vacancies in schools with many minority students were more likely to be filled with uncertified teachers.

Long-Term Costs

Another financial issue is long-term costs. Based on increases in teacher salaries as new teachers gain experience, costs are estimated to increase by between 19 percent and 32 percent in the seven to ten years after implementation. The cost of teachers increases with time as they gain additional experience and education and thus move up the salary schedule. In addition, if enrollment is increasing, districts may have to build or expand schools to accommodate the additional classrooms created by a class size reduction program. The key point is that the cost of maintaining smaller class sizes can easily increase over time.

Finding Teachers for Additional Classrooms

Statewide or large-scale implementation of class size reduction requires hiring a significant number of additional teachers. Prior to implementation, policy makers need to address two key issues around the supply of teachers. First, they need to ensure that qualified teachers are available. Second, policies are needed to keep experienced, educated, and certified teachers in schools where students' needs are the highest. Increasing the number of available, certified teachers can be accomplished through two strategies: (1) increasing the number of newly certified teachers and/or (2) attracting already certified teachers who are working in other fields into the classroom. Neither of these strategies is quick or easy to implement.

Strategies for increasing the number of newly certified teachers include adding faculty members to teacher preparation programs, increasing the number of institutions where teachers can be trained, and streamlining the certification process. Certified teachers might be attracted into classrooms by higher salaries, better benefits, and improved working conditions in schools. These strategies indirectly increase the overall cost of reducing class size, but can enhance the success of efforts to improve schools.

The main tool for keeping experienced teachers in high-needs schools is to provide them with incentives that make teaching in those schools more attractive than leaving. There are a wide variety of incentives that can be used, from paying higher salaries or bonuses to improving working conditions by, for example, increasing teachers' access to technology or professional development opportunities.

Finding Additional Classroom Space

When implementing class size reduction on a large scale, policy makers must also consider available space for classrooms. More classrooms come from building new schools, buying or renting portable classrooms, or reorganizing existing classroom space.

Class size reduction has been shown to be a flexible, if expensive, tool that has the potential to raise student achievement while reducing the achievement gap between minority and non-minority students.

California had problems finding adequate space for new classrooms. Before the statewide initiative, many schools and districts already had serious space limitations due to growing enrollment. The effort to reduce class size exacerbated these problems. By the second year of implementation, more than 25 percent of schools had converted special education, childcare, or music/art classrooms into regular classroom space.

District and school leaders can respond by reorganizing existing space and changing school schedules. For example, under Wisconsin's SAGE program, an average class size of 15 was reached by using one teacher with 15 students or two teachers with 30 students in a single classroom. Evaluators found, in general, no difference in student performance between these two classroom configurations.

Crafting Class Size to Meet Education Needs

Class size reduction has been shown to be a flexible, if expensive, tool that has the potential to raise student achievement while reducing the achievement gap between minority and non-minority students. A central appeal to state-level policy makers is its ability to allow them to rapidly change classroom configurations in a positive manner.

Targeted reduction is one approach to reducing class size. As discussed earlier, Wisconsin's SAGE program appears to have raised the achievement scores of all students in the targeted schools and to have reduced the gap in performance between minority and non-minority students.

A statewide approach, such as that taken by California, may also result in increased student achievement, but policy makers should take care to avoid potentially negative implications. As California's experience demonstrates, a trade-off of fast implementation on a massive scale may be a decline in teacher preparation and problems finding adequate space for classrooms, which may reduce the program's effectiveness.

A class size reduction policy can be crafted to meet some of the education needs within a state. However, regardless of whether a targeted or broad approach is taken, policy makers should consider class size reduction as part of a wider, systemic approach to increasing achievement that also includes teacher preparation, school finance, and adequate facilities.

Robert Reichardt is a policy researcher at McREL who specializes in class size reduction, teacher supply, and education finance.

Resources

Economic Policy Institute. (Ed.). (2000, October). *The class size policy debate* (Working Paper No. 121). Washington, DC: Author. Available: www.epinet.org

Finn, J. D., & Achilles, C. M. (1999). Tennessee's class size study: Findings, implications, misconceptions. *Educational Evaluation and Policy Analysis, 21*(2), 97-109.

Glass, G., & Smith, M. L. (1979). Meta-analysis of research on class size and achievement. *Educational Evaluation and Policy Analysis, 1*, 2-16.

Hill, E. G. (1997, February). *Class size reduction* (policy brief). Sacramento, CA: California Legislative Analyst's Office. Available:www.lao.ca.gov/class_size_297.html

Krueger, A. B., & Whitmore, D. M. (2001). *Would smaller classes help close the black-white achievement gap?* (Working Paper No. 451). Princeton, NJ: Princeton University, Industrial Relations Section. Available: www.irs.princeton.edu/pubs/working_papers.html

Molnar, A., Smith, P., & Zahorik, P. (2000). *1999-2000 evaluation results of the Student Achievement Guarantee in Education (SAGE) program*. Milwaukee, WI: University of Wisconsin. Available: www.uwm.edu/Dept/CERAI/sage.html

Reichardt, R. E. (2000). *The cost of class size reduction: Advice for policy makers*. RGSD-156. Santa Monica, CA: RAND Graduate School.

Stecher, B. M., & Bohrnstedt, G. W. (Eds.). (2000, June). *Class-size reduction in California: The 1998-99 evaluation findings*. Sacramento, CA: California Department of Education. Available: www.classize.org

Word, E., Johnston, J., Bain, H. P., Fulton, B. D., Zaharias, J. B., Achilles, C. M., Lintz, M. N., Folger, J., & Breda, C. (1990). *The state of Tennessee's Student/Teacher Achievement Ratio (STAR) Project: Final summary report 1985-1990*. Nashville, TN: Tennessee Department of Education.

Mid-continent Research for Education and Learning
2550 South Parker Road, Suite 500
Aurora, Colorado 80014
Phone 303.337.0990
Fax 303.337.3005

Tim Waters, executive director
Lou Cicchinelli, deputy director
Barbara Gaddy, editor
Dawn McGill, desktop publisher

This publication is based on work sponsored wholly, or in part, by the Office of Educational Research and Improvement (OERI), U.S. Department of Education, under contract number ED01CO0006. The content of this publication does not necessarily reflect the views of OERI, the department, or any other agency of the U.S government.

McREL
Mid-continent Research for Education and Learning
2550 South Parker Road, Suite 500
Aurora, Colorado 80014

Nonprofit
US Postage
PAID
Aurora, CO
80017
Permit No. 115

a brief on class size reduction for state and local policy makers

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Policy Brief - "Reducing Class Size: Choices and Consequences"	
Author(s): Robert Reichardt, PhD	
Corporate Source: Mid-continent Research for Education & Learning	Publication Date: 4/30/01

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

↑

X

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

↑

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

↑

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature: Louis Cicchinelli/k.	Printed Name/Position/Title: Louis F.Cicchinelli, Deputy Director
Organization/Address: 2550 So. Parker Rd., Suite 500 Aurora, CO 80014	Telephone: 303-632-5518 FAX: 303-337-3005
	E-Mail Address: lcicchin@mcrel.org Date: 5/3/01

(over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

University of Maryland
ERIC Clearinghouse on Assessment and Evaluation
1129 Shriver Laboratory
College Park, MD 20742
Attn: Acquisitions

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
1100 West Street, 2nd Floor
Laurel, Maryland 20707-3598

Telephone: 301-497-4080
Toll Free: 800-799-3742
FAX: 301-953-0263
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com