DOCUMENT RESUME

ED 431 729 SP 038 590

AUTHOR Geary, William T.
TITLE There Are Solutions for All Challenges of Cooperative Learning.
PUB DATE 1999-04-23
NOTE 18p.; Paper presented at the Annual Meeting of the American Educational Research Association (Montreal, Quebec, Canada, April 19-23, 1999).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cooperative Learning; Cultural Influences; Elementary Education; Elementary School Students; Elementary School Teachers; Grading; Group Activities; Interpersonal Competence; Student Behavior; Teacher Attitudes; Teaching Methods; Teamwork

ABSTRACT

This ethnographic case study investigated the challenges of six elementary teachers who attempted to embrace, comprehend, and apply elements of cooperative learning. The study examined solutions that teachers found effective in dealing with problems they encountered when using cooperative learning. Over the course of 1 year, researchers collected data from planning meetings, site visits with observations, questionnaires, individual interviews, and focus group discussions. Much of the data from teachers were self-report data. Researchers collected the data before, during, and after staff development sessions designed to help educators implement cooperative learning. The paper presents a quick summary of concerns about cooperative learning and an outline of solutions that were observed or reported. The summary focuses on whether: students are learning, high achievers are penalized, cooperation prepares students for success in a competitive world, group formation is problematic, one individual can subvert the group, group grading is unfair, students are overwhelmed by the responsibility, students are culturally unprepared for teamwork, behavior in cooperative learning presents a challenge, students form cliques and isolate others, and there is too much information with too little time. (Contains 72 references.) (SM)

There Are Solutions for All Challenges of Cooperative Learning

William T. Geary

Teacher Education and Curriculum Studies Department

College of Education, University of Hawaii at Manoa

Mail: University of Hawaii Center, Maui.

310 Kaahumanu Ave., Kahului, HI 96732

Voice: (808) 281-2229

Fax: (808) 984-3201

E-mail: gearyw@hawaii.edu

Paper presented at the annual meeting of the

American Educational Research Association

Montreal, Quebec, Canada

April, 1999

Purpose and Objectives

This paper investigates the challenges of teachers at various levels who attempt to embrace, comprehend, and apply elements of cooperative learning. The form of research was originally an ethnographic case study of six teachers in a metropolitan public elementary school who were incorporating cooperative learning into their classroom practices. The goal of the study was to identify and describe factors that help and hinder their attempts. The problems they faced led them to a variety of solutions. Since then, these ideas and some of the others introduced as follows have been tested as well by the author and others in elementary, secondary, and university teaching situations. The research question: What are some of the solutions that have been found effective as answers to common problems experienced by educators who use cooperative learning?

Theoretical Framework

Three major rationales support cooperative learning: learning theory, democracy, and preparation for careers and life. Vygotsky (1978) discusses the ability of an individual to improve by collaborating with more capable peers. Piaget (1932) feels that certain types of knowledge, such as social-arbitrary, can only be developed through interaction with others, and Gardner (1991) identifies interpersonal as one of his multiple intelligences. Constructivist cognitive psychology, as cited by the Sharans (1992) and Goodman (1989), also supports the value of social interaction in helping people expand their language base to interpret reality and build understanding. Several different authors argue that democracy is both supported by and a basis for cooperative learning. Parker (1883), Dewey (1915), Goodlad (1984) and others conclude that social interaction is a critical element of democracy. Gibbs (1994) and Kagan (1988) both conclude that cooperative learning and democracy must be integrated with each other. Dewey (1916) and Goodlad (1994), among many

others, state that school should prepare students for careers and life. They cite the importance of school as a model of society in helping them become responsible citizens, the need to prepare them for team efforts in the workplace, and the need to interact with others throughout their lives.

Methodology

This is a multiple case study of six teachers in the same elementary school, with two second-grade teachers, and one each in grades three, four, five, and six. The study uses evidence from a variety of data-gathering methods, including planning meetings, site visits with observations, questionnaires, many individual interviews, and a few focus group discussions. The project lasted for one school year, with data collected before, during, and after the staff development sessions all designed to help the educators implement cooperative learning. It includes teacher self-report data, plus observations from the author and two others who visited the teachers' classrooms. The various methods, length of the study, and use of multiple observers provide checks on the accuracy of the data. This was primarily a qualitative study, though some quantitative data was collected. It was organized in such a way to allow the cases to tell their stories, both individually and collectively.

The use of case studies as a method is explained by Stake (1988): "the principal difference between case studies and other research studies is that the focus of attention is the case...the search is for an understanding of the particular case, in its idiosyncrasy, in its complexity" (p. 256). The use of a multiple cases offers an advantage, as Yin (1989) notes: "the evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust" (p. 52). Stake (1978) argues that the value of case studies lies in how well they can generalize for the reader: "case studies will often be the preferred

method of research because they may be epistemologically in harmony with the reader's experience and thus to that person a natural basis for generalization" (p. 5).

The inclusion of focus groups allows the researcher to view the interaction of a group of teachers as a collaborative team, something not possible through the study of individual cases alone. In addition, paralleling the focus on cooperative learning during the inservices, it allows the participants to interact with and learn from each other. As Stewart and Shamdasani (1990, p. 16) observe, "Focus groups allow respondents to react and build upon the responses of other group members. This synergistic effect of the group setting may result in the production of data or ideas that might not have been uncovered in individual interviews." Focus groups must have a clear purpose; they are not aimless discussions. Krueger (1994, p. 16) defines their goal, which is to: "provide data from a series of focused discussions".

Some of the data collected was in anecdotal form, and teacher self-report. When asked how something was working, student teachers, mentors, and university colleagues all shared ideas. If they faced a challenge previously researched by this author, solutions were proposed for possible use. The individuals then tested those or other ideas, and reported on the success (or lack of same). It should be noted that this technique is less rigorous than some research methods, but is appropriate for the purposes of this paper. Irrespective of effectiveness, all educators should modify and adapt different techniques to their own styles. The ideas included in this paper should not be thought of as definitive answers that will work for all in every situation, but as methods which have worked for some, and are offered as solutions whenever such problems arise.

There are limitations. Case studies can be subject, at least in part, to the researcher's selective subjectivity. The use of triangulation may help mitigate the effect of any bias.

Data Analysis

There are many concerns regarding cooperative learning, shared by others in the literature, as well as those present in this author's research. Following is a quick summary of the issues, with an outline of some solutions observed and/or reported to have met with success.

Are they learning?

The teacher may choose, by both carefully selecting the task and monitoring the progress, to ensure that critical thinking and worthy results are achieved. Some processes, among them Jigsaw (Aronson, et. al., 1978), Jigsaw II (Slavin, 1990), Numbered Heads Together (Kagan, 1992) or Lyman's Think-Pair-Share (McTighe and Lyman, 1988) incorporate questioning and evaluation. But if the teacher just assigns one tutor to drill a student with flash cards, it is useful for memorization, so long as that is the goal, but is not likely to incorporate higher level learning.

High achievers penalized?

High achievers, argue some, are "brought down" by the group. This can happen, but it is a choice by the teacher. He or she need not lower expectations. Indeed, by keeping standards high and arranging support for the weaker students, both middle and low achievers benefit. Research shows that high achievers usually maintain top academic performance (Aronson, et. al., 1978; Johnson and Johnson, 1994; Joyce and Showers, 1995; Kagan, 1992; Slavin, 1990). They suffer no loss of learning, yet gain in their ability to work with others.

Not prepared for competitive world?

Cooperation does not prepare students for success in a competitive society, say others. However, by its very definition, competition requires cooperation in its design and implementation. Both must have "ground rules" so that all may benefit, and competitors must, on some level, choose to participate with others. There are potential negatives in both, so the teacher must construct the learning

experience carefully, for it is true that there are dangers possible in competition, as noted by many (Kohn, 1992; Kouzes and Posner, 1987; Sapon-Shevin and Schniedewind, 1991). But others note that the two are not mutually exclusive, and a win-win is possible (Adams and Hamm, 1990; Deutsch, 1949; Johnson and Johnson, 1994; Kagan, 1992; May and Doob, 1937; Mead, 1937 & 1961; Slavin, 1990). In competition it is possible for all to gain, such as when competition is the format, but success is based on comparison with each individual's personal best effort and achievement, rather than against that of others.

Group formation problematic?

Is there one "best" way to form groups and assign work? No. It depends on desired goals. The larger the group, the more ideas, but also the more difficult it is to get them all working together. For example, heterogeneous groups lead to greater variety, and may support the goal of bonding among different types of students. This is recommended for developing greater acceptance, and models a society in which, ideally, all can work with one another. Changing groups requires more time for teachers, both in planning combinations and in moving students. There are software programs available that rank students in order of achievement, then organize them in groups by mixing high, medium, and low achievers. But constant change of groups limits depth and bonding. One educator thought a six-week minimum necessary to develop bonding (Geary, 1996), and another switched every nine weeks, keeping students together for the duration of each quarter, facilitating grading. Gibbs (1994) prefers having "tribes" work together for the whole school year. Teachers must decide upon their educational goals first.

One individual subverts the group?

It is important for the teacher to guide students, so they know how to communicate and feel comfortable interacting with one another. It is also

important to assign tasks with process and outcomes considered, so interdependence is desirable and the best choice by all in the group.

"I won't work with anyone else!" If someone refuses or resists working in a group, it is wiser to let him or her do the project alone. However, such a person should have to finish the same amount of work that a whole group is assigned collectively. That way the student has more to do than if part of a group, and will eventually see the wisdom of voluntarily participating with others. If group interaction is a desired goal, the assignment can be defined in a way that working with others means less work than if choosing to function solo. The idea should be that each has less to do when helped by others. If the loner has difficulty communicating, it may be an opportunity to teach social skills or create a safer environment, as advocated by many (Farivar and Webb, 1994; Geary, 1996; Kagan, 1992; Lyman and Foyle, 1990)

One person does it all? Can some students can do all of the work for a group? Yes, it is possible, but not desirable, especially if attempting to foster a democratic classroom and developing new leaders (Damon and Phelps, 1989). A teacher must assign roles and responsibilities if such is a concern, providing for a division of labor so that no one does everything (Johnson, Johnson, and Holubec, 1988; Kagan, 1992). And if the teacher considers the work load carefully, the task assigned should be more than one student could do well within the time limit given.

A student doing nothing? Some express concern about the student who slides by, getting a "free ride". It is the teacher's responsibility to help monitor the effort of all. The student must choose to work alone, as above, or participate. The same need to assign roles with specific responsibilities should help (Johnson, Johnson, and Holubec, 1988; Kagan, 1992). But groups should also be encouraged to express their feelings if someone is not helping. If grades are involved, negotiations and contracts may be useful, as in the next section.

Group grading unfair?

What about group grades? There seem to be few complaints when all members feel that each contributed fully, and Cohen (1986) notes that this increases interdependence. But if someone does not help equally, either the group must report the problem when it begins to occur, or the teacher must rove around and note the limited help of an individual. If that occurs, the teacher may offer the group a negotiated option. The members should agree on what the individual must do in order for all to feel that he or she has put in a fair amount of effort, in which case the problem is solved. Or, if no makeup is forthcoming, then the group is given a grade for the project, with adjustments for who has put in more or less than the fair share of work. For example, if no change occurs, then the project is given a grade, but the members who did more than their share are given a grade two "steps" higher, and the one who has done less is given a grade two "steps" lower (this is part of the negotiation when the problem is identified). If the project earns a B, then those helping more receive an A minus, and the one helping less receives a C plus. All should be held individually accountable, even if there is a group grade.

Students overwhelmed?

What if they can't decide who is to do what, or how to proceed with an assignment? Some are not ready for major responsibilities yet, but that doesn't mean to drop cooperative learning. Instead, the teacher makes more decisions at first. This may be envisioned as helping them move from the beginning, where the teacher decides who will do what and what steps will be done in what order, then progressing as the teacher begins to delegate decision-making. Ideally, the students will, with maturity and experience, become able to set goals, assign roles, and create then follow a process to achieve the target on their own. This may be thought of as the teacher moving a continuum from a highly structured to loosely structured environment, as the students progress from more dependent to more independent

(Geary, 1996). To increase the likelihood of success, begin with simple processes and progress to more complex techniques (Cummings, 1990), also begin with pairs or small groups before attempting larger group projects (Gibbs, 1994).

Culturally inappropriate or shy?

What about students whose culture has not prepared them for working with others, or those who are shy? Some, either due to personality or perhaps family values, may be reluctant to speak up or participate, and it is important that they be respected. But as adults, all must be able to function in society with others, so they should learn to do so in the supportive environment of each classroom. It is up to the teacher or professor to help their students get to know their peers, creating an accepting and supportive learning environment. Certain cooperative learning techniques may be used to build confidence, such as Think-Pair-Share (McTighe and Lyman, 1988). A student is allowed time to think and/or write something alone, then share it with a partner and/or small group first. Thus, the student tests the idea out in the safer situation before being asked to share with all. The educator may ask for volunteers first, before calling on others, again building acceptance and confidence. When the teacher provides an atmosphere of acceptance rather than criticism, all students are encouraged to participate.

Discipline problems?

Behavior in cooperative learning is a challenge for some. The teacher who wants absolute silence at all times finds no solution here. But neither does that teacher prepare students for working as adults, with group projects that require communication. The teacher, ideally in agreement with the students, sets rules for communication that involve staying on topic, if necessary (Burns, 1990; Cohen, 1986; Moorman and Dishon, 1983). A deadline for results is the best motivator. An educator, like a business manager, should be concerned with output, and may need monitor regularly to ensure that the task at hand is attended to, so progress is

ongoing (Lyman, Foyle and Azwell, 1993). Some teachers solve problems for their students, while others teach how they can solve their own problems. Mediation and problem-solving processes are taught by some educators, in keeping with the goal of helping the students become more self-sufficient. One second grade teacher in particular, part of a year-long study, made it her goal to delegate this. By the end of the year, she felt confident in her students' negotiations, and could tell them: "If you have trouble problem solving, you can come and see me, but only after you have tried to work it out on your own." (Geary, 1996, p. 195)

Isolation and/or segregation?

Students tend to form cliques, and prefer to sit with friends. Someone who is "different" may be excluded, some examples being for reasons of gender, race, background, newness, or disability. To counter this, they must be integrated with others. First, create a positive learning environment where they learn to trust one another. Establish rules as necessary to ensure acceptance, and incorporate activities as necessary to develop trust and understanding (Geary, 1996). Communicating about commonalities is one way to break down stereotypes and help students learn what they have in common with one another. Effectively used, cooperative learning has been effective at improving racial harmony (Aronson, et. al., 1978; Hertz-Lazarowitz, 1993; Johnson and Johnson, 1994; Kagan, 1992; Slavin, 1990; Weigel, Wiser, and Cook, 1975). It has also helped when mainstreaming special education students in regular classes (Adams and Hamm, 1990; Slavin, 1990), and has improved interactions among those with different perceived status or cultural backgrounds (Kagan, 1992; Sharan and Sharan, 1992; Slavin, 1990).

Running out of time?

Too much information to cover? Time is an important factor. Lecture is a more useful form of teaching if the goal is speed. But if depth and understanding are desired, cooperative learning is better. No educator studied used cooperative

learning all of the time, but each became more clear on what style of teaching best fit the desired educational purposes (Geary, 1996).

Time-on-task. Of course, utilization of time is an important factor, too. Can students waste their time and procrastinate while in groups? Sure, but that can always be a problem, even for individuals, and progress needs to be monitored. But many have found that working with others can increase student motivation, which helps (Johnson and Johnson, 1994; Kagan, 1992; Kohn, 1993; Moorman and Dishon, 1983; Sharan and Sharan, 1992; Slavin, 1990). So it should not be surprising that researchers have found significant increases in student time-on-task, favoring cooperative classrooms versus control situations (Johnson and Johnson, 1994; Kagan, 1992; Slavin, 1990).

Conclusions

Cooperative learning is no passing fad, applicable in only a few limited situations. Rather, it is part of life, and a necessary tool in any teacher's repertoire, for use in any appropriate situation. Like any tool, it must be used properly. Educators who are unfamiliar or unsure about how to use it may be tempted to rationalize against incorporating cooperative learning techniques into their teaching. In doing so, they limit their effectiveness, and are likely to limit the success of certain students in their classes for whom learning from "more capable others" in a Vygotskian manner is their best chance for success.

Educational Importance

All educators, whether responsible for the education of those in preschool or in graduate school, must work with one another, and therefore will benefit from greater understanding of how to support their students in learning how to do so as well. It is not expected that the successful results of any individual would generalize

to all other situations. But knowing that some have found solutions to similar challenges should help others. Cooperative learning, like lecture and whole class discussions, should be a basic instructional technique for all. If we are to prepare them for careers, we must help them learn to work with others, or we do them a disservice. As Cummings (1990) states:

> more employees lose their jobs because of lack of people skills than lack of technical skills...[and] the ability to network (meet with people and socialize) is more likely to correlate with successful managers than the traditional management skills like planning and staffing. (pp. 2-3)

Since cooperation for adults is important to success, cooperative learning is necessary to help them prepare; we can not stop using it just because we face a difficulty in its implementation. We must find answers. There are solutions to all challenges in cooperative learning.

REFERENCES

Adams, D. & Hamm, M. (1990). Cooperative learning: critical thinking and collaboration across the curriculum. Springfield, IL: Charles C. Thomas.

Aronson, E., Blaney, N., Stephan, C., Sikes, J., & Snapp, M. (1978). The jigsaw classroom. Beverly Hills, CA: Sage.

Bayer, A. (1990). Collaborative-apprenticeship learning: language and thinking across the curriculum, K-12. Mountain View, CA: Mayfield Publishing.

Berg, K. F. (1992). Structured cooperative learning and achievement in a high school mathematics class. (Doctoral dissertation, University of Hawaii, 1992).

Bruner, J., & Haste, H. (Eds.). (1987). Making sense: the child's construction of the world. New York: Methuen.

Burns, M. (1992). About teaching mathematics: a K-8 resource. Sausalito, CA: Math Solutions Publications.

Burns, M. (1990). The math solution: using groups of four. In N. Davidson (Ed.), Cooperative Learning in Mathematics: A Handbook for Teachers. New York: Addison Wesley.

Cloward, R. (1967). Studies in tutoring. Journal of Experimental Education, 36, 14-25.

Cohen, E. G. (1986). Designing groupwork: strategies for the heterogeneous classroom. New York: Teachers College Press.

Cook, S. W. (1978). Interpersonal and attitudinal outcomes in cooperating interracial groups. Journal of Research and Development in Education, 12(1), 97-113.

Courtis, S. A., McSwain, E. T., & Morrison, N. C. (1937). Teachers and cooperation. Washington, DC: National Education Association.

Cummings, C. (1990). Managing a cooperative classroom. Edmonds, WA: Teaching, Inc.

Damon, W., & Phelps, E. (1989). Critical distinctions among three approaches to peer education. International Journal of Educational Research, 13, 9-19.

Davidson, N. (Ed.). (1990). Cooperative learning in mathematics: a handbook for teachers. Menlo Park, CA: Addison Wesley.

Deutsch, M. (1949). A theory of cooperation and competition. Human Relations, 2, 129-152.

DeVries, D. L., & Edwards, K. J. (1973). Learning games and student teams: their effects on the classroom process. American Educational Research Journal, 10, 307-318.

DeVries, D., Slavin, R. E., Fennessey, G. M., Edwards, K. J., & Lombardo, M. M. (1980). Teams-games-tournament: the team learning approach. Englewood Cliffs, NJ: Educational Technology Publications.

Dewey, J. (1915). The school and society (Rev. ed.). Chicago: University of Chicago Press.

Dewey, J. (1916). Democracy and education: an introduction to the philosophy of education. New York: Macmillan.

Educational Research Service. (1990). What we know about cooperative learning. Arlington, VA: author.

Elbow, P. (1981). Writing with power: techniques for mastering the writing process. New York: Oxford University Press.

Farivar, S. H., & Webb, N. M. (1994). Are your students prepared for group work? Middle School Journal, 25(3), 51-54.

Gardner, H. (1991). The unschooled mind: how students think and how schools should teach. New York: Basic Books.

Geary, W. T. Cooperative Learning, Staff Development, and Teacher Change. (Doctoral Dissertation, University of Hawaii, 1996). Dissertation Abstracts International, 57/07. AAC 9700521.

Gibbs, J. (1994). Tribes: a new way of learning together. Santa Rosa, CA: Center Source Publications.

Goodlad, J. I. (1994). Educational renewal: better teachers, better schools. San Francisco: Jossey-Bass.

Goodlad, J. I. (1984). A place called school. New York: McGraw-Hill.

Goodman, K. S., Goodman, Y. M., & Hood, W. J. (Eds.). (1989). The whole language evaluation book. Portsmouth, NH: Heinemann Educational Books.

Hertz-Lazarowitz, R. (1993). Using group investigation to enhance Arab-Jewish relationships. Cooperative Learning, 11(2), 13-14.

Johnson, D. W., & Johnson, R. T. (1994). Learning together and alone: cooperative, competitive, and individualistic learning. (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1988). Advanced cooperative learning. Edina, MN: Interaction Book Co.

Joyce, B., & Showers, B. (1995). Student achievement through staff development. (2nd ed.) New York: Longman.

Kagan, S. (1992). Cooperative learning. San Juan Capistrano, CA: Kagan Cooperative Learning.

Kagan, S. (1990). The structural approach to cooperative learning. Educational Leadership, 47(4), 12-15.

Kohn, A. (1992). No contest: the case against competition. (Rev. ed.) Boston: Houghton Mifflin.

Kouzes, J. M., & Posner, B. Z. (1987). The leadership challenge: how to get things done in organizations. San Francisco, Jossey-Bass.

Krueger, R. A. (1994). Focus groups: a practical guide for applied research. (2nd ed.) Thousand Oaks, CA: Sage.

Lippitt, P. & Lohman, J. (1965). Cross-age relationships - an educational resource. Children, 12, 113-117.

Lyman, L, & Foyle, H. C. (1990). Cooperative grouping for interactive learning. Washington, DC: National Education Association.

Lyman, L, Foyle, H. C., & Azwell, T. S. (1993). Cooperative learning in the elementary classroom. Washington, DC: National Education Association.

Maller, J. B. (1929). Cooperation and competition: an experimental study in motivation. New York: Teachers College, Columbia University.

May, M. A., & Doob, L. W. (1937). Cooperation and competition. New York: Social Science Research Council.

McTighe, J., & Lyman, F. T. Jr. (1988). Critical thinking in the classroom: the promise of theory-embedded tools. Educational Leadership, 45(7), 18-24.

Mead, M. (Ed.). (1937). Cooperation and competition among primitive peoples. New York: McGraw-Hill.

Mead, M. (Ed.). (1961). Cooperation and competition among primitive peoples. (Rev. ed.) Boston: Beacon.

Moorman, C., & Dishon, D. (1983). Our classroom: we can learn together. Englewood Cliffs, NJ: Prentice-Hall.

O'Brien, J. (1993). An extension of the concept of triangulation from data collection to data analysis in a qualitative study of successful kindergarten teachers. (Doctoral dissertation, University of Hawaii, 1993).

Parker, F. W. (1883). Notes of talks on teaching. New York: E. L. Kellogg.

Pepitone, E. A. (1980). Major trends in research on competition and cooperation, 1897-1980. In E. A. Pepitone (Ed.), Children in Cooperation and Competition. Lexington, MA: D. C. Heath.

Phillips, B. N., & D'Amico, L. A. (1956). Effects of cooperation and competition on the cohesiveness of small face-to-face groups. Journal of Educational Psychology, 47, 65-70.

Piaget, J. (1932). The language and thought of the child. (2nd ed.) New York: Harcourt Brace.

Sapon-Shevin, M., & Schniedewind, N. Cooperative learning as empowering pedagogy. In Sleeter, C. E. (Ed.). (1991). Empowerment through multicultural education. Albany, NY: State University of New York Press.

Sharan, S., (Ed.). (1994). Handbook of cooperative learning methods. Westport, CN: Greenwood Press.

Sharan, Y., & Sharan, S. (1992). Expanding cooperative learning through group investigation. New York: Teachers College Press.

Slavin, R. E. (1991). Synthesis of research on cooperative learning. Educational Leadership, 48(5), 71-82.

Slavin, R. E. (1990). Cooperative learning: theory, research and practice. Englewood Cliffs, NJ: Prentice Hall.

Stake, R. E. (1978). The case study method in social inquiry. Educational Researcher, 7(2), 5-8.

Stake, R. E. (1988). Case study methods in educational research: Seeking sweet water. In R. M. Jaeger (Ed.), Complementary methods for research in education (pp. 253-265). New York: American Educational Research Association.

Stendler, C., Damrin, D., & Haines, A. C. (1951). Studies in cooperation and competition: 1. The effects of working for group and individual rewards on the social climate of children's groups. Journal of Genetic Psychology, 79, 173-197.

Stewart, D. W., & Shamdasani, P. N. (1990). Focus groups: theory and practice. Newbury Park, CA: Sage.

Tobin, J. (1995). Youth development project: a text for teachers. Honolulu, HI: University of Hawaii, Manoa.

Tobin, J., Jacobs, A., Marker, N., Kimura, C. (1993). Youth development project in the schools: a course of study. Honolulu, HI: University of Hawaii, Manoa.

Totten, S., Sills, T., Digby, A., & Russ,. P. (1991). Cooperative learning: a guide to research. New York: Garland.

Vygotsky, L. S. (1978). Mind in society. (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.

Webb, N. M. (1989). Peer interaction and learning in small groups: a research summary. International Journal of Educational Research, 13(1), 21-39.

Webb, N. M. (1984). Stability of small group interaction and achievement over time. Journal of Educational Psychology, 76(2), 211-224.

Webb, N. M. (1982). Peer interaction and learning in cooperative small groups. Journal of Educational Psychology, 74(5), 642-655.

Weigel, R. H., & Cook, S. W. (1975). Participation in decision-making: a determinant of interpersonal attraction in cooperating interracial groups. International Journal of Group Tensions, 5(4), 179-195.

Weigel, R. H., Wiser, P. L., & Cook, S. W. (1975). The impact of cooperative learning experiences on cross ethnic relations and attitudes. Journal of Social Issues, 31(1), 219-244.

Weinstein, C. S. (1996). Secondary classroom management: lessons from research and practice. New York: McGraw Hill.

Yin, R. K. (1981). The case study crisis: some answers. Administrative Science Quarterly, 26, 58-65.

Yin, R. K. (1989). Case study research: Designs and methods (Rev. ed.). Newbury Park, CA: Sage.

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)

AERA 1999

I. DOCUMENT IDENTIFICATION:

Title: There Are Solutions for All Challenges of Cooperative Learning	
Author(s): William T. Geary	
Corporate Source: University of Hawai'i	Publication Date: April, 1999

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

☒

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: William J Geary	Printed Name/Position/Title: William T. Geary, Ed. D.	
Organization/Address: c/o UH Center, 310 Kaahumanu Ave, Kahului, HI 96732	Telephone: 808-281-2229	FAX: 808-244-6595
	E-Mail Address: gearyw@hawaii.edu	Date: 6/9/99

(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:

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