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THE EFFECT OF A SOCIAL LEARNING
INTERVENTION PROGRAM
ON GRADE SEVEN
PHYSICAL EDUCATION STUDENTS

by

JOAN MARIE HALAS

for

A Thesis submitted to the School of
Graduate Studies and Research in partial
fulfillment of the requirements for
the degree of Master of Science in
Kinanthropology in the School of Human
Kinetics, University of Ottawa, 1987

UNIVERSITY OF OTTAWA

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Abstract

The purpose of this study was to investigate the effectiveness of a social learning intervention program on grade seven physical education students. Four seventh grade physical education classes (N=265) served as control and experimental groups, and participated in the same physical education activities over a fourteen week period. The experimental group, made up of two separate classes (n=75, n=54), received a social learning book program that supplemented the regular physical education class. The log book program, titled the CARE Package, was based upon structural-developmental principles and used in the medium of written self-expression to promote positive social behavior in the gymnasium. Two control groups (n=76, n=60) participated in the regular physical education program over an equal period of time but did not use the social learning log books. One of the control groups received a performance log book to record progress in the physical domain. Pre and posttest data were gathered from a Physical Education Objectives survey. Posttest data also measured personal assessment of affective learning; liking of school, teachers, friends and physical education; and incidence of positive and negative behavior. An ANOVA was employed to compare differences between the groups. No conclusive statistical evidence at a group level was gathered to suggest that the social learning intervention had a significant effect on the grade seven students. Results from the qualitative assessments did indicate that a specific program designed to promote positive social behavior in physical education can contribute to an improvement in the social climate of the classroom. The conflicting results between the quantitative and qualitative analyses were attributed to this study's limitations on time, individualization and implementation which may have allowed for behavior change on an individual basis before significant group gains could be detected.

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I would like to dedicate this research to the many students at Chief Peguis Junior High who represented the often unmasked potential in each individual to take chances and try. Sometimes we become more than we ever dreamed only because we allowed others to see that potential in us.

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INTRODUCTION AND IMPORTANCE OF STUDY

The holistic development of the individual in terms of motor, cognitive, and affective behavior should be the primary objective in physical education (Ulrich, 1982). Although this is not a novel concept, a study of current physical education curricula indicates a lack of clearly defined affective or social behavior goals (Junior and Senior High School Physical Education, Province of Alberta, 1982; Curriculum Summaries 1980, French, Music, Physical Education, Province of British Columbia, 1980; Curriculum Guide for K-12 Physical Education, Province of Saskatchewan, 1980; Program Guide, Physical Education, Junior High School, Province of Quebec, 1976-77). As well, the need exists for reliable evaluation of these affective and social behavior outcomes within the physical education programs (Carlson, 1982; Wiese and Bressan, 1985).

This research focuses on the effects of a social learning log book intervention program on grade seven physical education students. While social growth of the individual is often stated as an equal objective in physical activity programs, it is rarely if ever designed into the actual program. And, assessment of whether or not this development actually occurs is most often left to assumption or chance (Gould, 1982; Stoner, 1982). The Manitoba K-12 Curriculum Guide (1981) offers extensive guidelines toward the attainment of motor and cognitive behavior objectives, yet suggests development of positive social interactions be attained in terms of "incidental teaching" (K-12 Physical Education, Province of Manitoba, 1981, p.245).

Although evaluation of social behavior in the physical education class may be lacking in the literature, evidence of the need for improving the pro-social climates in physical activity settings does exist in the related areas of sport, games and athletics

(Martens, 1982; Morris, 1986, Orlick, 1975, 1986; Sapon-Shevin, 1976). Most individuals participate in physical activity at one time or another in the school physical education class, which contains the contingencies of sport, games and athletics. These experiences are not always positive (Chief Peguis Junior High School students, personal communication, 1985). The gymnasium is a microcosm with the potential of eliciting both positive and negative social experiences. For this reason, greater emphasis on the development, implementation and evaluation of programs designed to promote a more positive encounter in physical education seems warranted.

Within the past few years, some educators and researchers (Massialas, 1982; Oglesby, Bell & Griffin, 1981) have attempted to implement social learning programs into mainstream physical education and recreation curricula. However, empirical evaluation of their effectiveness in achieving desired outcomes is lacking. Bredemeier, Weiss, Shields, and Shewchuk (1986) and Romance, Weiss, and Bockoven (1986) have pioneered work in values education and moral growth through physical education, and their research has provided some positive results.

Measurement of social behavior and subjective experience is a difficult yet necessary task. Chalip, Csikszentmihali, Kleiber, and Larson (1984), in a study of the variations of experience in formal and informal sport, suggest the importance of breaking down subjective experiences into basic components of measurement. A second study on the influence of decision-making on attitudes, creativity, motor skills and self-concept in elementary children provides evidence that children who experience growth in one area do not necessarily experience simultaneous growth in another area, which infers that "if physical educators wish to foster growth in all domains of the child, it cannot be assumed that this growth has taken place on evidence in a single domain" (Schempp, Zaichkowsky and Leonard, 1983, p.188). A third implication for research in this area is provided by Orlick, McNally and O'Hara (1978) who

systematically analyzed the impact of cooperative games on pro-social behavior.

Orlick et al were successful in their attempt to measure social experiences of the child, and concluded that any behavior can be assessed and recorded if it is clearly defined in observable terms.

For this study, a student-centered log book intervention program has been designed to supplement the regular physical education program. The basic goal of the intervention is for students to identify positive and negative behaviors, to commit to increasing positive behavior and decreasing negative behavior and to record outcomes in their log book. The objective simply stated is for students to "treat each other better" in physical education class. The log book intervention is based on structural-developmental principles (Bredemeier & Shields, in press) and encourages active student involvement to increase positive social behaviors and decrease negative social behaviors.

A log book method of student reporting is accepted as an effective medium for increasing the individual's self-perception (DeWine, 1971; Lund, 1983). Many behavioral psychologists believe that an increased self-awareness is a necessary step toward behavioral change (Jourard, 1972; Lewin, 1977). Recent examples of work in the fields of athletics and education (Allen, 1984; Orlick and Parlington, 1986; Sander and Kinley, 1986) reveal that log book use and self-reporting in journals is becoming more accepted by individuals at all levels.

It was expected that an effective implementation of the log book intervention as a supplement to the regular physical education program will increase incidence of positive social interaction in the gymnasium. Students who participate in the log book intervention are expected to demonstrate greater sensitivity towards the feelings of others and greater enjoyment of their physical education and school experiences as opposed to students in the comparison group. Students in the comparison or control group participate in the same physical education program without the intervention.

This investigation is limited by the degree to which participating teachers accept the objectives as worthwhile and valid, and their ability to implement the program. A second limitation is the time restriction of the program (fourteen weeks) which may not allow enough time to achieve significant changes in behavior. A final limitation is the lack of prior scientific research available in this area which might provide a more detailed reference for this inquiry. The implementation and evaluation of a pilot study is expected to overcome some of these limitations and thereby improve the study.

In summary, further study and support directed toward the development of a more applied methodology for enhancing the individual's experiences in physical education was warranted. Certainly a need exists for more extensive research in the area of holistic growth in education. Through the definition, preparation and evaluation of purposeful, as opposed to incidental teaching interventions, it is believed that development of social skills in any area of the school curriculum may be enhanced. If studies like this prove successful, teacher training could be re-organized to include the application of social learning techniques and a social learning intervention package could be made available to teachers who seek such materials, but who presently find that there are none available.

REVIEW OF THE LITERATURE

In the series *Education in the 80's*, education of the individual as a holistic being is stressed throughout the discussions on the "now" of physical education. As the purpose of this study involves development within the affective domain, the review of literature will address current research and thought in this area.

The first section deals with an assessment of existing physical education programs that do incorporate social learning aspects into the curriculum. The second area describes the physical education environment as it relates to pro-social development. In section three, the need for applied research interventions based upon structuraldevelopmental theories will be discussed. Finally, current research in the area of behavior measurement in related areas will be presented.

A general overview of the literature in the areas discussed make clear the inconsistency and lack of solid, empirical research regarding the affective domain in physical education. If, as McFarland (1985) emphasizes, the quality of society is closely linked to the quality of social interaction experienced in the educational setting, then the need for development of positive social climates in physical education programs should be particularly evident.

Physical Education: The Affective Domain

The Ontario Curriculum Guide has in its list of physical education objectives, "to help students develop social skills and attitudes including independence, responsibility, leadership, co-operation, sportsmanship, and an appreciation of the capabilities of self and others" (Physical and Health Education Guide, Intermediate Division, 1978, p.8). More specifically related to this study, the need to "develop

positive social interactions through a variety of physical activities " is a learning goal of the Manitoba K-12 Curriculum Guide for physical education (K-12 Physical Education, 1981, p.5.) The ability to accept oneself and others is a basic objective within the affective domain, and it is the fundamental responsibility of school systems to address these issues (Combs, Avila & Purkey, 1971; Purkey & Novak, 1984). It is clear that social growth is intricately related to the holistic development of the individual, and certainly a concern of the physical education profession. Most physical education curricula in Canada recognize the importance of social objectives within their field, yet offer little or no guidelines as to how to achieve these objectives.

Some programs have been developed that deal more directly with the attainment of social goals in physical education. *In Fair Play: Developing Self-Concept and Decision-Making Skills in the Middle School* (Massialas, 1982), teachers are encouraged to communicate to students the importance of respecting individual differences and the importance of setting individual goals. Although specific objectives and guidelines are available in the book, no evaluation of the programs effectiveness is mentioned. In the Utah State Inter-Disciplinary Strand on Values Education, the "courage to be imperfect yet the effort to improve" is stated as a sub-division in the physical education area (Talbot, 1980, p.19). Whether these goals are "teachable" or measurable in the school setting has not been studied.

The Government of Quebec (1981) has produced a curriculum guide that is exemplary in its identification and definition of affective learning objectives specific to the physical education environment. What is lacking, however, are specific strategies to ensure that the suggested activities do in fact promote the desired outcomes. As well, there has been no evaluation of this proposed program.

The Basic Stuff Series (Oglesby, Bell & Griffin, 1981) is designed to foster socio-external sources of self-concept through directed social learning. The idea of

self-disclosure, whereby the individual perceives the self through the process of discussion and sharing with others, is presented as a necessary aspect of the physical activity environment. Again, evidence as to the effectiveness of this program in achieving its objectives has not as yet been presented (Oglesby et al, 1981, p.16).

The concept of disclosure, or social interaction among individuals is promoted by Graves & Graves (1983) in their attempt to create a cooperative learning environment in the school. In seeking to influence behavior in situations where time restrictions exist, interpersonal processes need to be more explicit. Students need guidance in order to arrive at their own understanding and decisions with regard to experiences and desired pro-social behavior. Workshops are designed to aid teachers in the discussion process which is characterized by the following 3 stages: Identification of aspects of situations causing success or failure; 2. Analysis of those aspects in terms of how individuals experienced them and their similarity to previous experiences; and 3. Generalization to situations in the future, including possible changes to effect a better outcome (Graves & Graves, 1983, p.7-8).

Identification of social conflicts and concerns in the physical activity setting is a necessary first step toward resolution of conflict and growth in social terms. Not only has Orlick (1986) stressed the need for interdependent activities to facilitate social development, but the need to promote stress-coping skills in children is also important (Orlick, 1986; Roberts, 1986; Scanlan, 1986; Smoll, 1986). When conflicts do arise during play and physical activity, a time-out can be called in order to encourage awareness, understanding, analysis and hopefully resolution of the problem (Orlick, 1982, p.102-103). This requires that sensitive direction be offered to students. The teacher as an observer and initiator of student discussion must become a learner, as he influences students to discover resolutions to their own social needs. It is the teacher as a co-learner that can lead to creation of a trusting climate whereby mistakes are

tolerated and attainment of educational objectives may be possible (Logan, 1975a). Social learning in the physical education domain is possible. Specific groundwork is beginning to be defined. As Weiss & Bredemeir (1983) state in their analysis of developmental sport psychology, field study evaluation may be the key to determining the effectiveness of the pro-social development theories and strategies that do exist. This idea is strongly reinforced by the lack of empirical evaluation present in the literature that has been reviewed.

Wandzilak (1985), in a study of values development through physical education and athletics, suggests the following model by which the teaching of values may be approached. Primarily, teachers must be committed to values development and must serve as a role model to the students. The model itself consists of five stages:

1. Identify and define the values to be developed, which includes specification in behavioral terms.
2. Establish a curriculum, based on the specific objectives to be attained.
3. Use superordinate goals to reward positive social behaviors.
4. Evaluate the system based on the specific behavior objectives. This may include behavior observation, interviews, or pre-established inventories.
5. Use the evaluation data to assess program effectiveness in attaining stated objectives as well as making recommendations for further study.

Wandzilak emphasizes the need for new, valid instrumentation for measuring values development (Wandzilak, 1985).

Coe (1984) asked 56 eleven and twelve year old students a series of open-ended questions pertaining to their physical education experiences. When asked "what do you learn in phys. ed.?", 68% responded in terms of skill-related outcomes, while 4% replied that social outcomes (satisfaction) were achieved. Coe concluded that the

"lack of social awareness might suggest that more obvious attention be paid to this aspect and special opportunities for social learning be incorporated into a programme, either via content or via teaching style adopted" (Coe, 1984, p.124). Perhaps a greater awareness of the student's perceptions would allow the teacher to adapt the program to meet social objectives.

The Manitoba K-12 physical education curriculum guide states that students at the grade seven level should understand that relating effectively to others involves dependability, the ability to share, and tolerance of themselves and others (K-12 Physical Education, 1981, p.245). It is suggested that these goals be attained through incidental teaching. Wandzilak (1985) suggests that this method is haphazard, and for every incident that may be dealt with through teacher interaction, many others go unnoticed. Evidence in the literature supports the need for purposeful, as opposed to incidental teaching interventions.

Pro-Social Development in Physical Education

The student in the physical education class is confronted with challenges from the beginning of the class to the end, and will respond to these challenges, be they mental, physical or social, according to their perceived abilities (Bandura, 1977; Purkey and Novak, 1984). Bunting (1980) defines stress experiences as situations which compel an individual to examine personal reactions and responses in the midst of circumstances which require attention and action. It is not the event itself which elicits a specific response, but the individual's subjective experience of the event (LaBenne & Greene, 1969). Within the structure of the regular physical education class, students can experience success and failure, and this is almost always in the presence of others (Scanlan, 1986). In order to cope with this potentially stressful environment, students must be encouraged to accept themselves and others. Teachers

can create a less-threatening space for students if they understand the student's capabilities through effective observation (Romance, 1985). For example, the teacher's task is to teach for self-confidence, and to convince students that they can learn motor skills. Teachers must understand confidence, observe for confidence in students through their verbal and behavioral responses to activity, and instruct to promote confidence (Romance, 1985). Awareness of potential learning, be it positive or negative, is also necessary for the teacher to direct their teaching strategies toward the attainment of social objectives. This potential for positive and negative experiences can be communicated to the students in order to increase their sensitivity to their own environment.

Basic physical education programs include the contingencies of sport, games, and physical activity. Active participation has the potential to increase or decrease social growth. Orlick (1974) described the sporting environment as one with the capacity to enhance or destroy the individual. Some examples of this idea are as follows (Orlick, 1974, p.2-3): Potential of Sports Environment

CONSTRUCTIVE if it leads to: DESTRUCTIVE if it

leads to:

Psychological well-being	Psychological problems
Feelings of acceptance	Feelings of rejection
Inclusion	Exclusion
Positive feedback re: self	Negative feedback re: self
Sense of accomplishment	Sense of failure
Heightened self-esteem	Lowered self-esteem
Enhanced self-image	Negative effect of self-image
Enhanced body-image	Lowering of body-image
Satisfaction	Dissatisfaction

Happiness	Unhappiness
Cooperation	Intense rivalry
Concern for others	Lack of concern
Respect for rights of others	Disrespect for rights of others
Constructive Interaction	Destructive Aggression
Increased Sociability	Increased Sociability
Independence	Dependence
Self-reliance	Thoughtless obedience
Creativity and Innovation	Lack of creativity
Honesty	Dishonesty (cheating)
Playing within rules	Circumventing rules
Helping others	Hurting others
Enhanced desire to participate	Decreased desire to ...
Motivation to continue	Motivation to drop-out
Increased intrinsic motivation	Decreased intrinsic motivation
Active leisure life	Inactive leisure life
Fun and excitement	Lack of fun and boredom
Diversion from everyday stress	Unrealistically high levels of stress
Adaptation to stress	Maladaptation to stress

A review of this list serves to justify the need for a carefully planned and implemented social learning intervention if the pro-social potential is going to be realized.

Similar to the theory of potential negative and positive growth through sport, Sapon (1976) evaluated the quality of social interactions that are provided for through

formal group contingencies and games. Games were assessed in terms of procedures, behavioral components, structures, internal and external management, and parallelisms to social situations in the classroom. It was concluded that the majority of traditional game experiences actually reinforce unacceptable social behavior among participants. Some examples include name calling, eliminating players, and aggressive behavior. These behaviors, though included in the games children play, are considered to be unacceptable social behavior outside of the playground environment. The need for teachers to identify objectives, plan teaching strategies, measure results, and evaluate effectiveness of their programs is stressed if interested in attaining positive social objectives.

A final consideration for the physical educator at the junior high level (the age group involved in this study), is the onset of adolescence and the disturbances of self-image that can be augmented by environmental factors for this age group (Erickson, 1963; Robbins, 1983). The adolescent's perceived self in the gym is especially important, particularly in relation to the "class skill hierarchy" (for example, "you play right field"). Students are aware of their own capabilities and the capabilities of others, and these perceptions can motivate their behavior and performance (Weiss, Bredemeir, Shewchuk, 1986). In the acquisition of motor skills, "performance errors are not indications of failure, but of the learning process in action" (Kerr, 1982, p. 9). If learning is to be encouraged, so too must the acceptance of mistakes be promoted. Students may therefore need, as stated in the Manitoba K-12 Curriculum Guide, to demonstrate increased self-tolerance and tolerance of others. The need exists for good social learning programs, not only as they pertain to holistic educational objectives, but to enhance the overall learning potential for positive social growth. This is especially important in what can be a very threatening environment in the physical education class.

Structural-Developmental Theory

Structural-developmental theorists such as Bredemeier and Shields (in press) have related Piaget's views on cognitive-developmental perspectives to children's experiences in physical activity environments. Behavior is seen as being "mediated by an interaction between the active structuring mind and environmental stimuli" (Bredemeier & Shields, in press, p.65).

Weiss & Bredemeier (1983) have extensively assessed the need for learning interventions in physical education that are based on structural-developmental models. Games and youth sports are defined as activities that center around peer interactions which elicit social disequilibrium. When provisions are made for dialogue and evaluation of situations involving social conflict, moral growth can occur. Interventions based on structural-developmental principles are expected to have the greatest impact in bringing out the salient effects of social interaction in physical education programs.

Most of the existing interventions used by structural-developmental researchers (Bredemeier, 1985; Bredemeier, Weiss, Shields & Shewchuck, in press; Romance, Weiss & Bockoven, 1986) promote the creation of moral balances out of moral dilemmas that occur in physical activities. That is, conflicts are resolved through dialogue and moral reasoning. The focus of this study is to promote interpersonal and interdependent discussion before the conflicts arose. While respecting the moral reasoning abilities of the adolescent (Kohlberg, 1976), the purpose of this log book intervention is to prevent, rather than intervene, in moral dilemmas or social disequilibrium in the gymnasium.

Log Book Interventions: A Rationale for Use

Personal journals or log book use in physical activity mediums are becoming more widespread at levels ranging from elementary physical education (Carlson, 1986;

Sander and Kinley, 1986), to adolescence (California State Department of Education, 1986), to high calibre athletics (Orlick and Partington, 1986). More educators in all areas across the curriculum advocate the use of journals to enhance the learning process (Parsons, 1982; Lund, 1985; Allen, 1984). DeWine (1977, p.4) defines a student journal as "a diary like record written by each student in the class, reflecting his/her attitudes, feelings and the expansion of his/her cognitive learning as a course progresses", and provides positive reinforcement of learned behaviors while allowing students to develop more self-awareness.

With respect to the establishment of new behaviors, increased self-awareness through self-reporting exercises is seen as a potential pre-cursor to behavior change. DeWine (1977) studied the effect of journal keeping on the student's self-perception (n=86). Of the two groups involved in the study, the journal group indicated a significant improvement ($P=0.05$) on a posttest analysis inventory. Lund (1985, p.12) promoted the use of journals to improve thought development and states that a new synthesis of existing ideas is augmented when mental concepts are transformed into linear patterns of unity.

Furthermore, the whole concept of self-disclosure (Jourard, 1971) is facilitated through written expression. Hellison and Carlson (1981), in their work with students in a gymnasium setting, strongly recommend daily journals and self-report techniques as a method to elicit individual student needs and feelings toward their experiences in physical activity. When journal use stimulates practice in viewing the environment with a different schema, self-perception can be increased. The information gained through self-disclosure is perceived as an effective tool toward promotion of social growth in the gym.

DeWine (1977) suggested that student journal use can increase a student's level of guilt and anxiety when he realizes that his behavior may be unacceptable in relation

to the behavior of others. As well, journal use can help remove the obstacles that cause old behaviors while increasing the equilibrium of the new behavior through an improved interpersonal relationship between the instructor and student.

The log book intervention in this study was designed to increase the student's awareness of acceptable social behavior in the gym while maintaining a commitment to reduce moral dilemmas and conflict as defined through the initial goal setting activities of the CARE program.

Measurement of Social Behavior in the School Setting

In order to implement new programs or improve existing ones, evaluation of objectives should be carried out. Orlick, McNally and O'Hara (1978) measured the effect of a cooperative games program on the incidence of cooperative behavior in pre-schoolers. Pre and posttest behavior observation techniques and self-report measures (happy/sad faces scale) were administered after children participated in an 18 week program averaging four 30 minute sessions per week. Results indicated a significant increase in cooperative behavior in the intervention group as compared to the comparison group. Some recommendations from the study included the possibility of testing children's self-liking and liking of others, and that interventions of this nature be given enough time to work. Overall, Orlick noted that the methodological tools are available for measurement of behavior in studies involving social interactions.

Lindsay (1984) studied the influences of the teacher and curriculum on pro-social behavior in pre-school children. A breakdown of event-sampling observation of pro and anti-social behaviors indicated that the curriculum seemed to effect the sample group whereas the effect of the teacher proved inconclusive.

Weeden (1984) initiated a study in his school to determine the effects of a treatment program on the self-concept of seventh (n=127) and eighth (n=134) grade

students. Pre and posttest measurements of the subjects' scores on the the Piers-Harris self-concept scale and Florida Key: A Scale to Infer Learner Self-Concept in Secondary Education indicated significant results. Treatment in this experiment had been applied in math, science, and homeroom classes.

Romance, Weiss and Bockoven (1986) administered a specially-designed physical education program to two grade five classes (n=32) who participated in physical activities over an eight week period. Teachers in the experimental group used special teaching strategies designed to enhance moral growth based on structural moral development theory. The treatment program emphasized dialogue and the creation of moral balances. Moral reasoning data were collected using pre and posttest moral reasoning interviews. Pre-test interview scores indicated homogeneity of variance between control and treatment groups. A t-test was used to determine gain scores in the treatment and control groups. Results showed a significant increase in the sport, life, and overall moral reasoning in the treatment group while no concomitant growth resulted in the control group ($p < .05$). Physical performance measures were also taken to determine if the treatment had an adverse effect on the student's physical development. Overall, the results indicated that a specific program designed to promote moral development through physical education can effect changes in levels of moral growth.

Sander (1985) examined the Manitoba K-12 Physical Education Curriculum Guide's effect upon self-concept and physical fitness. Grade five students (n=52) from two Winnipeg schools participated in the six month study. Paired t-test data on self-concept scores (Piers Harris) collected prior to and following the training period indicated no significant improvement. Sander concluded that more specific affective teaching strategies needed in the present curriculum if program goals are to be met. Further study of the Manitoba curriculum guide at levels other than grade five was also recommended.

In each of the preceeding research examples, a concern exists regarding the methodologies employed. While recognizing the general and long-standing acceptance of the statistical designs utilized, Glass and Stanley (1970) question the validity of the statistical analysis used in these forms of quasi-experimental research, whereby experimental units are mis-represented as individual subjects and not intact classes. Logan (1975b), in a study similar to the experimental designs presented, clarifies this point; "because the research team could not be assured that gains made by each child were directly attributable to the approach taken by the teacher, it was thought best to regard groups of children within each class as the experimental unit" (p.41). If quasi-experimental research is going to continue using the same framework for study, then the corresponding statistical analysis can be accomodated through a descriptive or qualitative assessment of the data.

Of all the behavior measurement studies described in the the preceeding paragraphs, one underlying recommendation is shared by all. More work needs to be done in this field, particularly in the physical education environment (Orlick, 1986). Hall (1974) has provided much direction in applying behavior observation and measurement. A continued modification and application of these techniques provide the necessary framework for study of social behavior. The log book intervention in this study actively involved students in behavior observation exercises on a day to day basis. As Romance (1985) implies, improved observation skills may facilitate the pro- r social development within the physical education setting. This premise, along with the structuraldevelopmental theory which states that "the interpersonal context of sport must be brought explicitly to the participant's awareness" (Weiss & Bredemeier, 1983, p.22), should be represented in the log book intervention program.

METHOD

Subjects

Two hundred and forty grade 7 students at Chief Peguis Junior High School in Winnipeg, Manitoba participated in the study. The students were assigned to one of 10 homeroom classes upon registration prior to the start of the school year. These 10 classes were then designated into four physical education classes, with two physical education classes containing three homeroom classes each and two physical education classes made up of two homeroom classes each. At Chief Peguis, students who partake in the special music program are expected to maintain a positive attitude and commitment to their schooling. Therefore, in an attempt to have equivalent groups in all four physical education classes, an equal representation of music students comprised both the control and treatment groups. Two classes made up the control group ($n_{perf\ log} = 60$, $n_{control} = 76$) and two classes ($n_{gr\ log\ A} = 75$, $n_{gr\ log\ B} = 54$) made up the experimental group. Within the control groups, one class received a performance log book that dealt only with progress in the motor domain. This performance log was introduced to one control group in an attempt to have these students feel as if they were also receiving a "special" log book program. Chief Peguis Junior High was chosen for the study as it was viewed as having a good program with good teachers (Physical Education Program and Personnel Evaluation, River East School Division, Winnipeg, 1985), and good cooperation with the researcher was assured.

Procedure

Students in both control and experimental groups attended three 50 minute physical education classes per six day cycle. Both groups participated in the same physical education activities taught by the same teachers throughout the fourteen week duration of the study. The experimental group had the social learning log book intervention program added to the regular physical education program, while one control group received the performance log book.

The physical education class began and ended with students being allowed time to change into and out of their gym clothes. Attendance and warm-up exercises were conducted in smaller groups, with girls and boys separated. After this short period, all students were brought together for instruction on the day's activities. Students then participated in the planned program of activities.

Throughout the experimental period, all students participated in the following activity units: cross-country running, orienteering, volleyball, wrestling, aerobics, weight-training, european handball and basketball. These activities were in accordance with the K-12 Physical Education curriculum guide suggestions for the Province of Manitoba.

Pre-Experimental Preparation

Three physical education teachers were responsible for teaching in all four grade 7 physical education classes. They team-taught the two control groups as well as the two treatment groups. Prior to the beginning of the program, these teachers were given a step-by-step instructor's guide for implementing the student log intervention (see appendix C). Teachers participated in a one-hour workshop that outlined the program objectives and progressions. Before the study began, verbal feedback from these participating teachers indicated a strong commitment to follow the specific guidelines offered for implementing the-log book intervention.

The log book intervention program that was applied to the experimental group follows structural-developmental principles of increased interpersonal and interdependent awareness of participants in physical education and athletics (Bredemeier & Shields, in press). The basic intervention format involves the CARE program, (created for this study), which requires students to communicate, act upon, record, and evaluate positive and negative social behaviors in the physical education class (see The CARE Package-Student Log, appendix A).

The CARE program involves student input to identify positive and negative social behaviors in the gym, and set target objectives to reduce the negative behaviors and increase the positive behaviors. Progress toward reaching these goals is recorded on a weekly basis by students in their individual log books. As well, a specific observation exercise is introduced to reinforce student understanding of behavior and encourage student commitment to the CARE program. Teachers also chart student progress and report results to students on a weekly basis. The goals of the CARE Package are in accordance with the Manitoba physical education curriculum guide (K-12 Physical Education, 1981, p.245).

Implementation of the Program

The log book intervention program was introduced as a supplement to the regular class at the start of the school year (see table 1 for a description of the experimental design). During the first physical education class, all students (experimental and control) were told that the physical education teachers would be trying some new things to improve the program this year. They were then given the Physical Education Objectives Assessment (form A) to complete, which essentially asks how much does physical education help you in terms of physical, cognitive and social objectives. All students were told that their responses would be used to evaluate

student needs in physical education. Students were instructed to put their names on the front cover of the questionnaire, but their responses would be confidential. All names were then coded to ensure confidentiality of responses. This initial process was followed with all groups in an attempt to avoid the Hawthorne effect of experimental research (Aronson, 1975).

Table 1: Quasi-Experimental Design I

Quasi-experimental design featuring subject groups, pre and post-measurement instruments and program descriptions.

SUBJECT GROUPS	Control (2 grade 7 phys.ed. classes)	Control (n=76)	Performance (n=60)
PRE- MEASUREMENT	Phys. Ed. Objectives Assessment, Form A		
PROGRAM	Regular Curriculum and Teachers	Regular	Regular + Performance Log Book Intervention
POST- MEASUREMENT	Phys.Ed. Objectives Assessment, Form A	Personal Assessment of Affect Learning in Phys.Ed., Form B	
	Personal Assessment of Liking, Form C	Assessment Questionnaire for Positive and Neg- ative behavior, Form D	

Following distribution of the initial questionnaire (form A), all students were instructed as to the specific goals and objectives of the Chief Peguis physical education

Table 2: Quasi-Experimental Design II

Quasi-experimental design featuring subject groups, pre and post-measurement instruments and program descriptions.

SUBJECT GROUPS	Treatment (2 grade 7 phys.ed. classes)	Green Log A (N=75)	Green Log B (n=54)
PRE- MEASUREMENT	Phys. Ed. Objectives Assessment, Form A		
PROGRAM	Regular Curriculum and Teachers	+	Social Learning Log Book Intervention
POST- MEASUREMENT	Phys.Ed. Objectives Assessment, Form A	Personal Assessment of Affect Learning in Phys.Ed., Form B	
	Personal Assessment of Liking, Form C	Assessment Questionnaire for Positive and Neg- ative behavior, Form D	
SEPT. - DEC.	Teacher Anecdotal Log, Form E	Teacher Evaluation Interview Form F	Student Log Book evaluation

program. Students in the experimental group were then given the log books, and the social intervention supplement began. Students in the control group used the remaining class time to sit and talk with their class. From this time forward, all intervention in the experimental group followed the guidelines outlined in the Teacher's Guide (see

Appendix B), which included the recording of positive and negative experiences in personal log books on every third gym day. Program duration was fourteen weeks, and spanned the first trimestre of classes at Chief Peguis school.

In the final week of the program, posttest measures were collected from all groups on 1) how much physical education helps students in terms of physical, cognitive and social objectives, 2) how much physical education helps in terms of affective objectives, 3) liking of school, teachers, friends and after school activities, and 4) incidence of positive and negative behaviors in the physical education class (see appendix D). On the second last day of the experimental period, all students responded to the Physical Education Objectives Assessment (form A) and Personal Assessment of Learning Objectives in Physical Education (form B). Again, students were informed as to the confidentiality of their responses. On the final day, the Assessment Questionnaire for Positive and Negative Behavior (form D) and the Personal Assessment of Liking (form C) were administered in the last ten minutes of the class. In an attempt to ensure honesty in responses, the students were assured of anonymity and were not required to sign their names.

Measurement Tools

Measurement throughout the program involved student self-reports. The first test, the Physical Education Objectives Assessment (form A) assessed student perceptions of what and how much they learned in physical education (Carre, Mosher & Shutz, 1980). As grade seven students at Chief Peguis were new to the school, responses to the nine questions regarding physical, cognitive and affective objectives should have reflected how much students felt that physical education has helped them in the past in these three areas. This questionnaire is derived from the province of British Columbia's Personal Assessment in Physical Education series for the junior high

level. Hoyt reliabilities of .80 and .90 have been consistently found, making the inventory adequately reliable for assessing group status and change (Shutz, Smoll & Carre, 1985). Research has also provided sufficient evidence of construct validity (Shutz et al, 1985).

A second measure, Personal Assessment of Affective Learning in Physical Education (form B) was designed to measure specific affective learning objectives that pertain to this study. The questionnaire was modified from an assessment inventory used by Orlick (1986c) to assess athlete's perceptions of interpersonal change. A pilot study was conducted to test the suitability of this measurement instrument for the intervention group. The questionnaire was administered to a group of thirty grade seven students who were questioned as to their understanding of each item on the questionnaire. They clearly understood all items and the questionnaire was accepted as having face validity. After initial administration of the questionnaire, the students were re-tested at the end of the class. Scores for both test administrations were correlated and produced a test-retest reliability coefficient of .90. According to Henerson, Morris & Fits-Gibbon (1978), a reliability coefficient of .70 is acceptable for personal assessment tests.

A third measure, the Personal Assessment of Liking questionnaire (form C) evaluated student liking of friends, teachers, classes and outside of school activities. This self-report measure was modified from earlier work by Aronson (1975) and Orlick, McNally & O'Hara (1978). Face validity and test-retest reliability coefficients were determined by pilot study work. Results are pending completion of the pilot study.

A final between group measure, Assessment of Positive and Negative Behavior (form D) has students rate occurrence or recall the incidence of specific social behaviors that they or their classmates were involved in during the fifty minute class

period. Students were given a list of previously-defined social behaviors (derived from student log book responses and field study evaluations, see appendix C). Students were asked to rate the behaviors in which they or their classmates had been involved, and to indicate how often they helped or hindered others in the past fifty minutes.

Validation of this instrument is pending pilot study results.

A within group measure, the Student Log Entry (appendix A, page VII), was collected every third physical education class throughout the experimental period. Students in the intervention group were asked to recall their experiences at the end of the physical education class. Students were asked four questions pertaining to their experiences:

Has anyone done anything in class today to make you feel GOOD about yourself? If yes, what was it?

Has anyone done anything in class today to make you feel BAD? If yes, what was it?

What have you done to make someone feel GOOD?

Have you done anything that might have made someone feel BAD? What was it?

The log book form of self-report can be advantageous as it provides a wealth of information regarding the students on-going experiences and feelings. When it is designed to make limited demands on the respondents in terms of time and effort, its utility is increased. As Henerson et al (1978) indicate, self-reports are very useful measurement tools. When feedback is asked of the respondents they tend to feel that their input is important, thus increasing the likelihood of honest responses (Henerson et al, 1978). A limitation of the log book self-report is that it is dependent on the power of recall, which may be difficult after a long period of time, and may also be affected by selective recall. Unless students are directed in advance to look for specific

behaviors, they may only remember those behaviors that fit into their personal views of the world (Henerson et al, 1978). Potential problems of recall were lessened in this study because students were required to immediately recall a relatively short period of time (ie. the past fifty minutes of class time). Secondly, specific behaviors were previously identified, which is expected to increase the likelihood of receiving valid responses from all students. Pre-definition, discussion and observation of the specific positive and negative behaviors which occurred in the physical education class increased the likelihood of gaining accurate and valid responses in the log book.

The teachers also kept a log (form E) to record any significant events or personal observations regarding all four classes, as well as comments regarding implementation of the intervention program. This log included a record of teacher intervention in student-centered conflict that may have occurred in any of the four classes. This log was maintained throughout the duration of the experimental period, and was up-dated on every third physical education class.

At the end of the experimental period, all three teachers were interviewed as to their personal assessments of the intervention program (form F). The teachers were asked to compare the social interaction of the treatment and control groups, and to make recommendations pertaining to implementation of the log book program. The salient points of view drawn from all three teachers is presented in the discussion of the results.

Statistical Analysis

A quasi-experimental design was used. Although it is difficult to cross the borders between pure and applied research, the impact of these differences can be moderated through compromise (Aronson, 1975). In this study, the experimenter shared the dual role of researcher and teacher, and interpretation of the data must

consider this potential bias (Smith, 1983). As Bogdan (1984, p.13) states, "potential bias and distortion is the price we must pay to gain understanding of complex social settings". As well, internal validity may decrease as a consequence of increased emphasis on external validity, which was a priority in the evaluation of the CARE program.

Table 2 outlines the assessments which were made in this study. Five between group measures compared the intervention to control groups (form A, B, C, D, E). One within group measure evaluated progress of the intervention group (i.e. log book) and teacher interviews assessed both within and between group progress. Descriptive analysis of the data (averages, range, frequency tables, graphs) is presented in the results section.

A simple statistical procedure (ANOVA) was carried out on each item of the first questionnaire (form A) to assess differences between the experimental and control groups on gain scores from pre and posttest measurements. A test for homogeneity of variance was applied to all pre-test scores on form A. A with-in group measure (t-test) was used to evaluate gain scores on each variable by each of the four groups. Also, an ANOVA was carried out on the individual items of the three post measures to which numbers were assigned (forms B, C, D). This was done to help determine whether differences existed between experimental and control groups at the conclusion of the study, as perceived by students.

The numerical data in the student log books were averaged and graphed on a weekly basis and the qualitative data were categorized where possible and discussed. A similar procedure was followed with the teacher log book when the recordings permitted graphing, otherwise the log book information was presented and discussed along with the teacher interview results.

Table 3: Presentation of Measurement Instruments

Presentation of measurement instruments, period of data collection and description of data analyses.

Measures for Both Experimental and Control Groups	Period of Data Collection	Data Analysis
Form A Physical Education Objectives Assessment	pre and post	for individual items: avg., std dev., test for homogeneity of var., t-test for sig. diff. on within group scores, and ANOVA comparing experimental and control groups on gain scores (pre and post)
Form B Personal Assessment of Affective Learning in Physical Education	post	for individual items: avg., std dev. and ANOVA comparing experimental and control groups on post measures
Form C Personal Assessment of Liking	post	for individual items: avg., std dev., and ANOVA comparing experimental and control groups on post measures
Form D Assessment Questionnaire for Positive and Negative Behavior	post	for individual items: avg., std dev., and ANOVA comparing experimental and control groups on post measures
Form E Teacher Anecdotal Log	fourteen week program duration	numerical data: graphs where possible, discussion of qualitative information
Form F Teacher Evaluation Interview	post	discussion of qualitative information presented in results section

Descriptive Analysis of Student Participation in Physical Activity Programs	post	percentage student involvement for each group
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Measure for Experimental Group Only

Log Book Evaluation	fourteen week program duration	numerical data: graphs where possible, discussion of qualitative information
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RESULTS

A series of six questionnaires (A, BI, BII, C, D1, D11, appendix C) measured 52 dependant variables and assessed overall differences between the groups. Post hoc analysis was carried out on a total of nine significant dependant variables, of which the treatment group green log A was significantly higher than the treatment group green log B and the performance group on the six items respectively. Significant differences were not found among the groups on all other items.

The social learning log books were analyzed to produce a descriptive evaluation of the within group progress of the two treatment groups. As well, information from a teacher anecdotal log and interview was qualitatively assessed in order to highlight individual differences not accounted for in the statistical evaluation. Results from these analyses supported use of the CARE program as a teaching strategy to promote individual pro-social behavior change and creation of a more positive social climate in the gymnasium.

Personal Assessment of Learning in Physical Education

Hartley's $F(\max)$ statistic on homogeneity of variance on pretest scores (form A) revealed that the four intact classes were equivalent on the pretest measures of learning in physical education. $F(\max)$ values for all nine variables were not significant, and only approached the critical value of 1.96 on two items; $F(\max)$ get along with others = 1.92 and $F(\max)$ have fun and enjoy yourself = 1.85. A summary of the $F(\max)$ values can be found in table 4.

Significant differences were found between the four groups on two of the dependant measures on Form A, how much does physical education help you to: try

Table 4: Hartley's F Max Statistic

Results of Hartley's F(max) statistic to test for homogeneity of variance on questionnaire A pre-test dependant variables for all groups.

Dep. var	F(max)	
1	1.70	
2	1.36	
3	1.35	
4	1.23	Critical value = 1.96
5	1.56	df = 77
6	1.92	
7	1.17	
8	1.60	
9	1.85	

new things $F=2.66$, $p=0.05$ and learn to stay fit $F=2.70$, $p=0.05$. Significant difference did not exist on the remaining 7 dependant items, spanning cognitive, affective and motor objectives, at the 0.05 significance level. See table 5 and 6 for a summary of the F ratios and probability levels.

Duncan's statistic was used to carry out further post hoc analysis on the significant items. For the variable learning to try new things, the group green A showed significant gains in comparison to green log B ($M_{gr\ log\ A} = +0.02$, $M_{gr\ log\ B} = -0.34$). The group green log A also indicated significant gains in learning to stay fit as compared to the performance group and group green log B ($M_{gr\ log\ A} = +0.07$, $M_{perf\ log} = -0.41$ and $M_{gr\ log\ B} = -0.35$). Means, t values and Duncan groupings on significant variables can be found in tables 5 and 6.

Analysis of t values for within group changes on pre and post test scores were in a negative direction, with the group green log B showing significant decreases on a total of six items. For the variable 'how much does physical education help you' to learn and practice new skills, the group green log B revealed a significant decrease, $t = -2.07$, $p=0.04$. The group green log B also showed a significant decrease in learning to

Table 5: Means Scores for Questionnaire A

Means for pre, post and gain scores; t-values (within group gain scores) and F-ratios (between group differences and post hoc analysis on all four groups) for questionnaire A.

How much does physical education help you to :

Variable (Group)	Pre	Post	Gain	t	pr>t	F	DNC GRP
learn skills							
Perf log	3.04	2.82	-0.23	-1.45	0.15	2.02	
Control	2.98	2.98	0.00	0.00	1.00		
Gr log A	2.98	3.12	0.14	1.13	0.26		
Gr log B	2.94	2.69	-0.25	-2.07	0.04		
							df=212 pr>F=0.46
learn how the body works							
Perf log	2.37	2.20	-0.16	-1.03	0.31	0.87	
Control	2.54	2.53	-0.02	-0.14	0.89		
Gr log A	2.32	2.47	0.15	0.99	0.33		
Gr log B	2.32	2.24	-0.08	-0.57	0.57		
							df=213 pr>F=0.46
feel good about yourself							
Perf log	2.94	2.98	0.04	0.21	0.83	1.22	
Control	3.15	3.12	-0.34	-0.23	0.81		
Gr log A	2.81	3.02	0.20	1.37	0.18		
Gr log B	2.94	2.72	-0.22	-1.45	0.15		
							df=213 pr>F=0.35
learn about fitness							
Perf log	2.94	2.71	-0.25	-1.60	0.12	1.11	
Control	2.97	2.98	0.02	0.12	0.90		
Gr log A	2.95	2.88	-0.07	-0.47	0.64		
Gr log B	3.10	2.76	-0.33	-2.00*	0.05		
							df=210 pr>F=0.30

develop personal fitness, $t = -2.00$, $p=0.05$. For the variable learn sports games, both

- * significance at 0.05 level
 ** for Duncan Groups: means with the same letter are not significantly different

treatment groups green log A and green log B were found to have negative changes, $t(\text{gr log A}) = -2.05$, $p=0.05$ and $t(\text{gr log B}) = -2.91$, $p=0.01$. The group green log B showed significant decreases in the variable try new things, $t = -2.50$, $p=0.02$, learn to stay fit, $t = -3.02$, $pr>0.004$ and have fun enjoy yourself, $t = -2.48$, $p=0.02$. Of the 36 mean gain scores, all but 9 were in a negative direction.

The assessment of affective learning in physical education was measured using Form BI and BII. Of the four variables on Form BI and the ten items on form BII, all items were non-significant at the 0.05 probability level. See table 7 for a Summary of the F-ratios for Questionnaire BI, and table 8 for a summary of the F-ratios for Questionnaire BII.

Table 7: Summary of ANOVA: Questionnaire BI

Summary of ANOVA (F - ratio, df, probability, significance) for questionnaire BI individual variables.

In your physical education classes this term, did you become any more or less aware of:

Item	df	F	pr>F
1. feelings of others	261	0.83	0.48
2. your own feelings	261	1.73	0.16
3. how your actions affect others	260	1.86	0.14
4. how the gym can be a less threatening environment	258	1.56	0.20

Table 8: Summary of ANOVA: Questionnaire, BII

Summary of ANOVA (F - ratio, df, probability, significance) for questionnaire BII individual variables.

Over the course of the term did you experience any difficulty in your ability to:

Variable	df	F	pr>F
accept yourself	257	1.02	0.38
accept others	257	0.06	0.98
enjoy yourself/have fun	253	1.01	0.39
cooperate with classmates	256	0.45	0.72
help others learn skills	255	1.11	0.35
resolve problems	257	0.57	0.64
encourage other students	254	0.46	0.71
accept resp. for actions	256	0.15	0.93
express your feelings	254	1.96	0.12
be considerate of feelings	257	0.20	0.90

A review of the means for all fourteen items measuring affective learning of all four groups indicate a positive direction or improvement of the scores. The highest means for all four groups on an individual item reveal that students were able to improve their ability to have fun and enjoy themselves in physical education the most ($M = 1.54, 1.83, 1.64, 1.42$). Lowest means for all four groups indicate that less improvement was made in the students' ability to accept others ($M = 0.88, 0.97, 0.96, 0.62$), help others learn skills ($M = 0.93, 0.51, 0.80, 0.77$), and resolve problems ($M = 0.86, 0.75, 0.69, 0.53$). These results can be found in table 9 and 10.

Table 9: Group means and standard deviation for BI

Group means and standard deviations for each individual item on questionnaire BI

BI. This term, did you become any more or less aware of:

Dependant Var	GROUP (n,mean,standard deviation)			
	Perf Log	Control	Gr Log A	Gr Log B
1. feelings of others	60,0.87, 1.17	76,0.93, 1.17	75,0.72, 1.51	54,0.59, 1.45
2. your own feelings	60,0.87, 1.33	76,0.70, 1.24	75,0.60, 1.40	54,0.30, 1.57
3. actions affecting others	60,1.33, 1.28	75,0.70, 1.32	75,0.87, 1.51	54,0.78, 1.38
4. less threatening atmosphere in gym	59,0.83, 1.31	75,0.93, 1.46	74,0.85, 1.57	54,0.41, 1.38

Table 10: Group means and standard deviation for BII

Group means and standard deviations for each individual item on questionnaire BII

BII. This term, did you become any more or less aware of:

Dependant Var	GROUP (n,mean,standard deviation)			
	Perf Log	Control	Gr Log A	Gr Log B
1. accept yourself	59,0.88, 1.13	75,0.97, 1.29	75,0.96, 1.29	52,0.62 1.24
2. accept others	59,1.03, 1.16	75,1.12, 1.21	75,1.07, 1.47	52,1.12 1.32
3. enjoy yourself/ have fun	58,1.54, 1.30	75,1.83, 1.27	74,1.64, 1.41	50,1.42, 1.49
4. cooperate	58,1.14, 1.19	75,1.83, 1.13	75,0.89, 1.56	52,1.10, 1.35
5. help others	59,0.93, 1.16	73,0.51, 1.33	75,0.80, 1.58	52,0.77, 1.44
6. resolve problems	59,0.86, 1.14	76,1.22, 1.22	75,0.69, 1.60	51,0.53, 1.45
7. encourage others	58,1.36, 1.36	75,1.31, 1.31	73,1.65, 1.65	51,1.36, 1.36
8. acc. resp. for actions	58,1.16, 1.21	76,1.22, 1.34	74,1.10, 1.52	52,1.08, 1.33
9. express feelings	58,1.16, 1.56	74,0.68, 1.43	75,0.69, 1.52	51,0.53, 1.32
10. be considerate	58,0.90, 1.54	76,1.07, 1.35	75,0.92, 1.48	52,0.96, 1.28

Personal Assessment of Liking

When asked how much they like various aspects of school life (Form C)

significant differences were found on the following variables: your classmates $F = 2.10$,

$p=0.03$, your phys. ed. classmates $F = 3.30$, $p=0.04$ and your teachers $F = 3.97$,

$p=0.01$. Significant differences were not found on the other variables at the 0.05

probability level. A summary of the ANOVA for questionnaire C can be found in table 11.

Table 11: Summary of ANOVA: Questionnaire C

Summary of ANOVA (F - ratio, df, probability, significance) for questionnaire C individual variables.

This year how much do you like:

Variable	df	F	pr>F
coming to school	224	2.23	0.09
coming to phys. ed.	225	2.23	0.38
your classmates	224	2.10	0.03
your phys. ed. classmates	224	3.30	0.04
time with friends after school	224	0.42	0.74
phys. active outside school	225	1.74	0.16
part. in school spons'd phys. ed. activities	224	1.98	0.12
your teachers	225	3.97	0.01
your phys. ed. teachers	225	2.38	0.07

Post hoc analysis of the group means for this survey indicated that the group green log A liked their classmates more than the performance log group (M gr log A = 3.92, M perf log = 3.45, $p=0.05$). Both groups green log A and control indicated that they liked their phys. ed. classmates more than the green log B (M gr log A = 3.74, M control = 3.72, M gr log G = 3.23, $p=0.05$). When asked how much they liked their teachers, the group green log A scored significantly higher than the performance log group (M gr log A = 3.77, M perf log = 3.09, $p = 0.05$). See table 12 for a summary of the post hoc analysis for questionnaire C.

Table 12: Post Hoc Analysis: Questionnaire C

Post hoc analysis (Mean, df, MSE, Duncan Grouping, Prob. Level = 0.05) on significant differences between each group for questionnaire C.

Variable	Group	N	Mean	Dnc	Grp	Inter- polation
your	Gr log A	74	3.18	A		
classmates	Control	47	3.92	A	B	Gr log A
df=223	Gr log B	53	3.55	A	B	perf log
MSE=1.29	perf log	53	3.45		B	
your phys.ed	Gr log A	74	3.74	A		
classmates	Control	47	3.72	A		Gr log A
df=224	Gr log B	54	3.30	A	B	Control
MSE=1.29	perf log	53	3.23		B	Gr log B
your	Gr log A	75	3.77	A		
teachers	Control	47	3.43	A	B	Gr log A
df=225	Gr log B	53	3.40	A	B	Perf log
MSE=1.25	perf log	54	3.09		B	

A review of the group means for all items produced scores above the 3.0 mark with the exception of group green log B who liked coming to school the least (M = 2.94). Highest average scores pertaining to coming to phys. ed. (M = 4.43, 4.19, 4.12, 3.89). Group means for questionnaire C can be found in table 13.

Table 13: Group means and standard deviation for Questionnaire C

Group means and standard deviations for each individual item on questionnaire C.

C. This year, how much do you like:

Dependant Var	GROUP (n, mean, standard deviation)			
	Perf Log	Control	Gr Log A	Gr Log B
1. coming to school	54,3.17, 1.27	47,3.15, 1.30	74,3.18, 1.29	53,2.64 1.32
2. coming to phys.ed.	54,3.96, 1.05	47,4.09, 1.06	75,4.01, 1.22	53,3.72 1.20
3. your classmates	53,3.45, 1.15	47,3.60, 1.06	74,3.92, 1.21	53,3.55, 1.07
4. your phys.ed. classmates	54,3.30, 1.18	47,3.72, 0.99	74,3.74, 1.19	53,3.23, 1.15
5. time with friends after scl.	54,3.91, 1.36	47,4.17, 1.26	75,3.99, 1.31	52,4.10, 1.22
6. be phys. active out-side scl.	54,1.23, 1.23	47,4.19, 0.99	75,3.91, 1.18	53,3.76, 1.36
7. part. in scl. spons. activities	54,2.89, 1.33	47,3.36, 1.15	74,3.41, 1.29	53,3.32, 1.31
8. your teachers	54,3.09, 1.19	47,3.43, 1.06	75,3.77, 1.06	53,3.40, 1.18
9. your phys. ed. teachers	54,4.43, 0.92	47,4.19, 1.08	75,4.12, 1.05	53,3.89, 1.01

Assessment Questionnaire for Positive and Negative Social Behavior

Questionnaire DI and DII (Appendix C) surveys the students' perceptions as to the amount of positive and negative social behaviors that were involved in during one class. Form DI asked how often each student interacted with another student in either a positive or negative manner. Of the ten variables, five involved negative behaviors

and five involved positive behaviors. Using an ANOVA on each individual item revealed non-significant differences between the groups, indicating that the groups were equivalent on these variables. A summary of the F - ratios can be found in table 14.

Table 14: Summary of ANOVA: Questionnaire DI

Summary of ANOVA (F - ratio, df, probability, significance) for questionnaire DI individual variables.

During this physical education class, how often did you:

Dependant Variable	df	F	pr>F
encouraging someone to do well	223	1.52	0.21
laugh at someone	222	0.76	0.51
ignore someone	220	0.24	0.87
compliment someone	221	0.46	0.71
pick on someone	219	1.26	0.29
call others names	221	0.59	0.62
ask someone for help	223	0.27	0.85
show off	223	0.57	0.64
ask someone to join a game	222	1.78	0.15
congratulate someone	223	0.97	0.41

Similarly, an ANOVA was used to compare the group means on the ten variables that asked students the frequency of positive and negative social interactions as initiated by other students. Significant differences between the groups were noted on four items: frequency of other students encouraging you $F = 4.31$, $p=0.01$, frequency of other students asking you for help $F = 6.07$, $p=.001$, frequency of other students congratulating you $F = 5.59$, $p=0.001$. All other variables had F - ratios below the

critical value at the 0.05 level of significance. For a summary of the F - ratios see table 14.

Table 15: Summary of ANOVA: Questionnaire DII

Summary of ANOVA (F - ratio, df, probability, significance) for questionnaire DII individual variables.

Dependant Variable	df	F	pr>F
encouraging you	224	4.31	0.01
laugh at you	225	0.54	0.66
ignore you	224	0.35	0.79
compliment you	224	2.18	0.09
pick on you	223	0.62	0.60
call you names that hurt	225	0.80	0.50
ask you for help	225	6.07	0.001
show off	224	0.83	0.48
ask you to join a game	224	3.88	0.01
congradulate you	224	5.59	0.001

A further analysis of the means using Duncan's post hoc test showed that the means were distinct from each other as follows. For frequency of other students encouraging you, both the green log A group and the control group indicated a higher frequency of encouraging behavior than the performance log group and the green log B group (M gr log A = 2.42, M control = 2.37, M perf log = 1.76, M gr log B = 1.67, $p=0.05$). Again, the control group and green log A group showed a significantly higher frequency of asking for help actions as compared to the performance log group and green log B group (M control = 2.00, M gr log A = 1.77, M perf log = 1.18, M gr log B = 0.93, $p=0.05$).

The control group asked others to join a game more often than the performance log group (M control = 2.49, M perf log = 1.57, $p=0.05$). When comparing the groups on the incidence of congratulating behavior, the green log A group congratulated others more frequently than the the green log B group and the performance log group and the control group congratulated more often than the performance log group (M gr log A = 2.82, M control = 2.57, M gr log = 2.00, M perf log = 1.73, $p=0.05$). A review of the Duncan groupings for all other groups on each variable reveals that significant differences did not exist beyond those stated above. Post hoc analysis on the significant items for form DII can be found in table 16.

Table 16: Post Hoc Analysis: Questionnaire DII

Post hoc analysis (Mean, df, MSE, Duncan Grouping, Prob. Level = 0.05)-on significant differences between each group for questionnaire DII.

Variable	Group	N	Mean	Dnc Grp	Inter- polation
encourage you df=224 MSE=2.11	Gr log A	73	2.42	A	Gr log A
	Control	47	2.37	A	Control
	Gr log B	55	1.76		perf log
	perf log	54	1.67	B	Gr log B
ask you for help df=225 MSE=2.11	Gr log A	47	2.00	A	Control
	Control	73	1.77	A	Gr log A
	Gr log B	55	1.18		Control
	perf log	54	0.93	B	Gr log B
ask you to join a game df=224 MSE=2.91	Gr log A	47	2.49	A	
	Control	73	2.23	A	Control
	Gr log B	53	1.59		Gr log B
	perf log	54	1.57	B	Perf log
congratulate you df=224 MSE=2.76	Gr log A	73	2.82	A	Gr log A
	Control	47	2.57	A	Gr log B
	Gr log B	53	2.00	B	Perf log;
	perf log	55	1.73	C	Control Perf log

A review of the group means for the form DI indicated that the highest average response for behaviors for all four groups was 'congratulating' (M=2.91, 3.44, 3.08, 3.06) and the lowest average response was 'asking someone for help' (M=1.63, 1.73, 1.66, 1.46). Highest average scores for negative behaviors were 'ignoring someone' (M=1.41, 1.89, 1.62, 1.72) and 'laughing at someone' (M=1.67, 1.41, 1.58, 1.52). The lowest average scores were for 'showing off' (M=0.52, 0.49, 0.73, 0.65).

Averages of incidence of positive behaviors for form BII were similar to that of form DI. Highest average scores for positive behaviors were 'complementing' (M=1.84, 2.59, 2.25, 2.07) and 'congratulating' (M=1.73, 2.58, 2.82, 2.00). Lowest average scores were for 'asking others for help' (M=1.18, 2.00, 1.77, 0.93). For negative behaviors highest average was 'showing off' (M=2.49, 2.15, 2.10, 1.94). Lowest average scores were for 'calling others names' (M=0.87, 0.58, 0.80, 0.57). See table 17 and 18 for group means for DI and DII.

Table 17: Group means and standard deviation for DI

Group means and standard deviations for each individual item on questionnaire DI

DI. During this physical education class, how often did you:

Dependant Var	GROUP (n, mean, standard deviation)			
	Perf Log	Control	Gr Log A	Gr Log B
1. encourage	56, 2.52, 1.37	45, 2.73, 1.39	74, 2.70, 1.51	52, 2.21, 1.39
2. laugh at	56, 1.41, 1.53	45, 1.89, 1.61	73, 1.62, 1.78	52, 1.73, 1.59
3. ignore	55, 1.67, 1.59	44, 1.41, 1.54	73, 1.58, 1.62	50, 1.52, 1.58
4. compliment	56, 2.86, 1.59	44, 3.11, 1.458	74, 2.78, 1.62	51, 2.88, 1.48
5. pick on	56, 0.82, 1.28	45, 0.73, 1.21	71, 1.31, 1.62	51, 1.20, 1.51
6. call names	55, 0.78, 1.21	45, 0.47, 0.97	73, 0.71, 1.42	52, 2.21, 1.30
7. ask for help	56, 1.63, 1.70	45, 1.73, 1.44	74, 1.66, 1.56	52, 1.73, 1.55
8. show off	56, 0.52, 0.87	45, 0.45, 0.94	74, 1.66, 1.56	52, 1.73, 1.55
9. ask someone to join in	55, 1.76, 1.76	45, 2.53, 1.78	74, 2.14, 1.72	52, 2.88, 1.66
10. congratulate	56, 2.91, 1.72	45, 3.44, 1.47	74, 3.08, 1.59	52, 1.20, 1.60

Table 18: Group means and standard deviation for DII

Group means and standard deviations for each individual item on questionnaire DII

DI. During this physical education class, how often did you:

Dependant Var.	GROUP (n,mean,standard deviation)			
	Perf Log	Control	Gr Log A	Gr Log B
1. encourage	55,1.76, 1.51	46,2.37, 1.32	73,2.43, 1.54	52,1.67, 1.37
2. laugh at	55,1.55, 1.76	47,1.72, 1.69	72,1.55, 1.60	54,1.32, 1.48
3. ignore	55,1.36, 1.44	47,1.26, 1.50	72,1.54, 1.69	54,1.35, 1.62
4. compliment	55,1.84, 1.60	47,2.59, 1.38	73,2.25, 1.57	54,2.07, 1.48
5. pick on	55,1.44, 1.68	46,1.04, 1.49	72,1.17, 1.50	54,1.13, 1.59
6. call names	55,0.87, 1.39	47,0.58, 1.14	73,0.80, 1.37	54,0.57, 1.07
7. ask for help	55,1.18, 1.32	47,2.00, 1.60	73,1.77, 1.67	54,0.93, 1.26
8. show off	55,2.49, 1.93	46,2.15, 1.81	73,2.10, 1.80	54,1.94, 2.00
9. ask some- one to join in	54,1.57, 1.73	47,2.49, 1.64	73,2.23, 1.72	54,1.59, 1.71
10. congrat- ulate	55,1.73, 1.60	47,2.58, 1.68	73,2.82, 1.69	53,2.00, 1.66

Log Book Evaluation: Student Responses

One hundred and twenty nine students who made up the social learning log book program submitted log books at the end of the program. There were some missing entries due to absences from school on a log book day, or arrival of new students to the class after the school year commenced. These missing entries were not

included in the total number of responses for each log book page that was analyzed. A descriptive and qualitative analysis of the student responses in the log book follows.

When asked 'what do other kids do to make you feel good?', students provided a wide variety of responses. The most frequent responses per group are represented as follows: praise me for my efforts (gr log A = 23%, gr log B = 28%), and cheer me on (gr log A = 12%, gr log B = 11%).

When asked 'what do other kids do to make you feel bad?', the most frequent responses were: put me down (gr log A = 35%, gr log B 28%), laugh at me (gr log B = 18%), and yell at me (gr log A = 14%). See table 19 for percentage responses to page 2.

Table 19: Student Responses to CARE Log Book Program - Page 2

Percentage of student responses to CARE Log Book Program (page 2)

Things other kids do to make me feel good:

Responses	Gr log B	Gr log A
Praise me for my efforts	28	23
Cheer me on	10	16
Don't put me down	11	12
Help me	8	9
Encourage me	7	8
Cooperate	11	4
Congratulate me	0	8
Other responses	25	22

Things other kids did to make me feel bad:

Responses	Gr log B	Gr log A
Put me down	28	35
Laugh at me	18	4
Pick me last	3	7
Yell at me	0	14
Don't cooperate	8	3
Other responses	43	38

After identifying the group goals, each student was instructed to select one or two individual behaviors that they would like to work on personally to improve this year in phys. ed. Responses were delineated into male and female goals for each treatment group, and frequency responses can be found in appendix F.

The percentage of total group responses in identifying individual positive and negative behavior goals was also calculated for each group. For green log A, 24% chose complimenting, 20% chose to include everyone, 20% chose to help others, 19% chose to cooperate and 11% chose to be friendly or nice. For green log B, 15% chose to congratulate, 18% to be a good sport, 18% to compliment, 19% to make friends, 9% to include everyone and 10% chose other goals not listed. Table 20 contains a list of these responses.

With regard to decreasing negative behaviors in the group green log A, 18% chose name calling, 14% laugh at others, 22% not listening, 19% complaining and 11% showing off. For group green log B, 27% chose name calling, 40% laughing at others, 16% fighting, and 11% swearing. A summary of the percentage responses can be found in table 20.

Students were asked to make a commitment to the goals of the CARE program. When asked 'how hard can you work' toward reaching the goals that the students set, group green log A responded as follows: 13% said a little, 57% said a lot and 31% said completely and group green log B responded: 13% said a little, 48% said a lot, and 39% said completely. For working to accept yourself, in green log A 8% said a little, 49% said a lot and 43% said completely. In green logB, 9% said a little, 52% said a lot and 35% said completely.

In working to accept others, green log A group committed: 8% a little, 57% a lot and 35% completely. For the green log B, 7% committed a little, 54% a lot and 39% committed completely. Finally, students made the following commitment to record

Table 20: Student Responses to CARE Log Book Program - Page 3

Percentage of student responses to CARE Log Book Program (page 3)

Individual goals for increased positive social behaviors:

Responses	Gr log B			Gr log A		
	Male	Female	Total	Male	Female	Total
Congratulate	0	0	0	19	12	15
Be a good sport	0	0	0	13	24	18
Compliment	26	22	24	25	12	18
Make friends	2	0	1	17	22	19
Include everyone	21	20	20	0	7	3
Encourage others	0	0	0	0	7	3
Help others	16	25	20	0	7	3
Be friendly/nice	5	18	11	0	2	1
Cooperate	26	12	19	0	0	0
Others	4	2	3	20	0	10

Individual goals for decreasing negative social behaviors:

Responses	Gr log B			Gr log A		
	Male	Female	Total	Male	Female	Total
Name calling	26	28	27	24	12	18
Laughing at others	26	54	40	16	13	14
Not listening	0	0	0	18	26	22
Complaining	0	0	0	13	26	19
Showing off	0	0	0	13	9	11
Fighting	23	9	16	2	9	5
Swearing	17	5	11	0	0	0
Others	9	4	6	12	4	8

honestly in their log books: green log A, 28% said a little, 49% said a lot and 24% said completely; green log B, 17% said a little, 39% said a lot and 44% said completely. A review of these results indicated that over 70% of the students in each group made a commitment to work a lot or completely toward the CARE program goals. Table 21 contains the percentage of students commitment to the CARE package.

Table 21: Student Responses to CARE Program Objectives - Page 4

Percentage of student responses to CARE Program objectives (page 4)

Responses	Gr log B			Gr log A		
	A Little	A Lot	Com pletely	A Little	A lot	Com- pletely
1. ...work to goals	13	48	39	12	57	31
2. ... accept yourself	9	52	39	8	49	43
3. ...accept others	7	54	39	8	57	35
4. ...record honestly	17	39	44	28	49	24

Midway through the experimental period, students were involved in a behavior observation exercise that required them to record incidence of positive and negative behaviors in a class volleyball game. As illustrated in table 22, in group green log A, 58% of the observed actions were positive and 42% were negative.

Once per cycle, students filled out the daily log entry which asked them to record their social experiences during the past class. This form was used five times throughout the experimental period, as it was not used on weeks when other forms were being used. Of the four questions asked, students had most difficulty responding to the question 'did you do anything to make someone feel bad today?'. A list of student responses can be found in appendix F.

Students were also asked to circle a number on a scale of 1 - 10 which best represented their feelings regarding whether it was a lousy day or a great day. Average responses for each intervention group slightly increased (positively) with each trial over the experimental period. Table 23 contains the average responses for each group on each of the experimental days.

Table 22: Observed Actions and Words Recorded by Students

Percentage of observed actions and words recorded by students in the CARE program

	FEEL GOOD		FEEL BAD	
	Actions		Actions	
	Number of Responses	% of Total Responses	Number of Responses	% of Total Responses
Gr log B	96	59	68	41
Gr log A	137	58	102	42
	Words		Words	
	Number of Responses	% of Total Responses	Number of Responses	% of Total Responses
	Number of Responses	% of Total Responses	Number of Responses	% of Total Responses
Gr log B	69	53	60	47
Gr log A	82	61	53	39

Table 23: Average Student Responses, page 7

Average student responses per treatment group to daily log enter 'today was a 1...10 day'.

Trial (Sept. - Nov.)	1	2	3	4	5
Group green log A	5.43	5.75	6.02	6.54	7.00
Group green log B	5.64	6.21	5.79	5.85	6.45

Descriptive Analysis of Student Participation in Physical Activities

Students in each of the four groups were asked to indicate their involvement in organized sport. The control group revealed that 17% were involved in interschool sports, 57% in school sponsored clubs, 17% in school intramurals and 49% in community sports and recreation. The performance log group students showed that 10% were involved in interschool sports, 37% in school clubs, 45% in intramurals and 47% in community sports and recreation.

The group green log A had the following participation: 17% in interschool activities, 47% in school clubs, 17% in intramurals and 45% in community sports and recreation. Finally, the group green log B indicated that 4% participated in interschool sports, 48% in school clubs, 15% in intramurals and 48% in community sports and recreation. A summary of these results can be found in table 24.

Table 24: Student Participation

Percentage of student participation in physical activities per group.

Group	Type of Activity			
	Inter-school	School Club	Intra-murals	Community Spts/Rec'n
Control	17	57	17	49
Perf log	10	37	45	47
Gr log A	17	47	17	45
Gr log B	4	48	15	48

Summary of Teacher Anecdotal Log

The teachers who implemented the log book intervention program kept a weekly record of any significant events, personal observations and comments regarding program management and progress (see appendix E). A summary of the more

important observations indicate that the implementation of the log book went quite smoothly. From the onset of the program, the teachers noted a positive change in the classroom games. Students initiated comments pertaining to the way the games were being played in relation to the goals that they had set (e.g. "no mouthing off...", "he's not using the goals we set"). Similar comments were not made in the control groups.

The teachers signaled out the individual progress of certain students who had had problems relating socially to the other students in the class. With the exception of one group of girls in the green log B group and one group of boys in the performance log group, most of the students who had had individual problems in the gym in the past seemed to be getting along better. One student in the green log group B, who was a repeating student, seemed to benefit particularly from the social climate promoted through the use of the log book.

As for the implementation and management of the log book program, no major problems arose. Overall, the program covered nine six day cycles from August 28 to December 4. Students filled out a log book form an average of one time per cycle. Due to interruptions in the school timetable (e.g. administration days, special events) students sometimes missed a regular log book day. To compensate, the next best day to fill in the log book was used. Considering the size of the classes (green log A = 75, green log B = 54) and the program, administration of the log books went well.

Teachers were also encouraged to maintain a log of teacher intervention in student conflicts (see table 25). Over the fourteen week period, a total of 7 teacher interventions (whereby the teacher removes the students from the regular classroom activities in order to speak to them) took place. Of these, two involved the students in the treatment groups and five involved students in the control groups. Except for the performance log group, one isolated incident each took place in the green log book A and B and control group. In the performance log book group, a series of four related

incidents took place over the span of a month, with the final incident recorded on the last day of the experimental period.

Table 25: Teacher Intervention in a Student -Student Conflict

Log of teacher intervention in a student - student conflict

Control Group

Date	Number of Students Involved	Reasons
Sept. 19	2	Fight in changeroom. Peer pressure influenced one kid to beat up the other. Parents contacted.

Performance Log Group

Date	Number of Students Involved	Reasons
Oct. 2	3	Students did not want to play with their teams.
Oct. 21	7	Poor sportmanship and very little effort in helping their teammates.
Oct. 26	1	Poor effort in class and working with the others.
Dec. 4	2	Fight in class during testing.

Green log A Group

Date	Number of Students Involved	Reasons
Oct. 29	2	One student furious with the scorekeeper due to a time discrepancy in a playoff game.

Green Log B Group

Date	Number of Students Involved	Reasons
Sept. 3	1	Student disrupted class

Responses to the Teacher Interview Questions

At the conclusion of the study the three teachers who implemented the log book intervention were asked to assess the effectiveness of the program (a transcript of the interview can be found in appendix E). With regard to the two intervention groups green log A and B, the teachers noted a definite improvement in the sportsmanship and related this progress to the group goals that were set by the students. The improved sportsmanship resulted in better games being played during classtime.. Certain individuals who had problems in their physical education class in the past seemed to be doing better. As well, the students readily accpeted the english as a second language students and helped them to understand and participate in the activities. A student who had a repeater from the year before and who had problems with his classmates in the past participated well with this group. In reference to the group goals set, one student-who was constantly reminded of how her behavior affects others responded "I just can't be good". One month later, this same student thanked one teacher saying "I've improved, I don't cut anyone down anymore". Her friends reminded her that she still calls people names in other classes, to which she responded "but I'm good in phys. ed.". Overall, the teachers felt that although they witnessed many improvements, both intervention groups still had problems in terms of their social behavior as is characteristic of their age group. They did seem to get better as the term progressed over the fourteen week period.

Of the two control groups, the performance log group had a certain group of boys who consistently had problems playing together as a team. Otherwise, the rest of the class seemed to get along fairly well, and along with the other control group, were described as exemplary in their behavior and enthusiasm for class from the start of the school year. All three teachers noted that the control group had a certain percentage of students who were particularly good, and stood out amongst other classes in recent

years. In comparison, they felt that less mature students comprised a good percentage of the treatment groups A and B. In particular, one group of girls in green log B group had many problems in terms of their behavior and frequently had to be reminded of their group goals and to cooperate and improve the class. Another teacher in the school had described this same group as one of the worst classes she had taught in five years with regard to their maturity level. One of the physical education teachers reinforced this observation with the remark, "can you imagine what the group would have been like had they not used the log book?".

The teachers found the log books to be a worthwhile teaching tool that was particularly effective in communicating expectations for social behavior on a regular basis. For some students, the use of the log book was almost a reward and they welcomed the opportunity to express themselves. Despite the fact that some students resented the fact that writing in their log book took away some of their playing time, the teachers felt that this time was well spent. They all agreed that they would use the program again with the following recommended alterations:

1. Use different versions of the daily log book entry (page 7, appendix A) so that it isn't so repetitious.
2. Make more unscheduled use of the log books, particularly in small groups.
3. Increase the time frame used to administer the log books as the entries were sometimes rushed at the end of class.
4. Increase the feedback to students on a one to one basis with regard to individual progress toward the group and individual goals.
5. Use the log book in a bound booklet form, with pencils attached.

Overall, they believed that the log book program had contributed to the physical education program. They hope to continue use of the program with the two control groups who have yet to receive the social learning intervention. They have

used the initial goal setting stages of the program (pages 2,3,4) with the grade nine students, and the response to the exercise was encouraging. Finally, they look forward to seeing the possible long term effects on the social behavior of the students who had used the program.



DISCUSSION

An exploratory study was carried out to evaluate the effectiveness of a specially designed social learning log book program for grade seven students. Current research in the area of measurement in the affective domain indicated a need for new, reliable measurement tools. Thus, four selfassessment inventories (forms A, B, C, D) were developed for this study in an attempt to take measurements in the following areas: what was learned in physical education, especially in the affective domain; liking of school, teachers, classmates and out of school experiences; and incidence of positive and negative social behavior in the physical education class. Program effectiveness was also evaluated by information gathered from the CARE log book self-reports. This information from the log book selfreports were catagorized and analyzed where possible. As well, a qualitative evaluation on the part of the teachers who implemented the program was conducted to gather evidence as to the worth of the intervention as a supplement to the regular physical education program.

Section one evaluates the log book use by students and attempts to draw out the most pertinent information and data gathered over the fourteen week implementation of the CARE program. In section two, the difference in the characteristic make-up of the four groups (gr log A, gr log B, perf log and control) in terms of personality and behavior is analyzed. Section three contains a discussion of the results from the four measurement inventories (forms A, B, C, D) as well as the teacher anecdotal log (form E) and evaluation interviews (form F). Finally, section four presents some of the factors that may have influenced effective implementation and evaluation of the program.

A general overview of the results of this study should help to better understand the complexity of the problems involved in measuring in the affective domain, and point out the need for further research in this area.

In particular, the two sets of conflicting results from the quantitative and qualitative evaluations raise concern regarding the appropriateness of each measurement tool when conducting field studies. Evidence from this study suggests that qualitative data be used to detect individual changes that may be undetected by statistical measures at the group level. Overall, results from this exploratory attempt to measure the effectiveness of the CARE program on grade seven students indicate that a specially designed social learning log book program can influence creation of a more positive social climate in the gymnasium.

Evaluation of Log Book Use

The first activity of the social learning log book introduced the CARE program objectives and asked students to identify what other kids do to make them feel good or bad about themselves in the gym. Results from both intervention groups were quite consistent in singling out such actions as praising (23-28%), cheering (10-16%), being put down (28-35%) and being laughed at (4-18%). A similar trend in responding was revealed in both pilot study results and in post experimental administrations to grade seven and nine students from other classes. What was most evident from the frequency and variety of the large number of responses was that physical education students at the junior high level either had an already existing vocabulary for expressing their feelings regarding their social experiences in the gym, or were stimulated by the log book to develop one. As illustrated by their responses in terms of negative and positive interactions, they certainly indicated an awareness of their own status as a social being in a peer environment.

The second intervention involved the students in setting their own standards of acceptable behavior. The process of inviting student input to set goals can increase the commitment and motivation to succeed and is a widely promoted exercise by researchers and educators alike (California State Department of Education, 1978; Carlson, 1986; Gould, 1982; Hellison, 1987; Purkey, 1986; Stoner, 1982). There did not appear to be a great difference in the type of goals set by students indicated a willingness to make a commitment toward the CARE program.

The choice of individual goals set by both males and females were quite similar and seemed to be more a reflection of the type of group goals set by each intervention group. Of particular note, all of the goals listed by the students match the Manitoba physical education curriculum objectives for positive social interactions. Whereas one might find it difficult to evaluate the objective "tolerance of themselves and others" (K-12 Physical Education, 1981, p.245) as it is stated in the Manitoba guide, such behavioral goals as 'congratulating', 'no name calling', 'including everyone' and 'no fighting' are more specific, observable and measurable in terms of affective evaluation. With the valid concern for quality measurement in the affective domain (Griffen, 1982; McGee, 1982; Mood, 1982; Stoner, 1982; Weise, 1982), results from this study suggested that student input should be called upon when creating objectives for effective affective evaluation in physical education.

Once the behavior goals were set, students were informed that their behavior patterns would be observed and recorded from time to time as a means of assessing progress in the CARE program. The daily log entries reinforced the fact that each student's behavior was to be observed, and it was hoped that this process would encourage students to behave in more socially acceptable ways as well as stand accountable for their own actions. Similar to this method, Austin and Brown (1978) developed a checklist of desirable behavioral traits in which they recorded and

reported group progress during games in class. They found this method of observation and feedback to students to be a practical activity to enhance social development in the gym.

In this study, students participated in a behavior observation task similar to the one promoted by Austin and Brown. Results from both intervention groups indicated a slightly higher percentage of positive as compared to negative actions and words being elicited in the games played in class (feel good actions and words 53-61%; feel bad actions and words 39-47%). According to the teachers who implemented the CARE program, this particular task was a more popular activity provided immediate feedback as to how students were progressing toward the goals they had set at the onset of the program. The teachers were able to communicate the on-going need to decrease the negative behaviors and increase the positive behaviors in the class. This need was clearly reinforced by having students involved in a visual observation task.

Similar to suggested activities for social development in physical education as expressed by the California State curriculum guide (1978), students were encouraged to report whether they had been helpful or hurtful or neither during the physical education class (page 7). This activity was the least popular with students, especially when it was used once per cycle.

At first, student response was fairly good. However, with continued use of the same page, student responses became vague (i.e. yes no) and students complained that "they had already done this page" or "this is boring". The teachers who implemented the program did not have the time to write back any comments to the students regarding their responses, especially with such large classes. Had the students received some form of personal feedback from the teacher pertaining to their responses (e.g. John, it's nice to see that you have been encouraging your team on during volleyball, Mary, can you explain why you think that you made someone else feel bad today?),

they may have become more responsible and accurate in responding, as well as more accountable for their actions. As Lund (1983) and Allen (1984) state, teacher feedback should be sensitive, supportive and frequent if journal writing is to be more effective. Most likely, this type of feedback would be more suited to teachers working with groups smaller than those in this study.

When asked to describe what type of day it has been in physical education today (page 7) students in both intervention groups showed a slight increase in their enjoyment of the class over the experimental period. Students who tended to respond more favorably to the class most often indicated that they liked the activity being offered that day. Students who were asked to demonstrate for the class or lead warm-ups also tended to respond more favorably to class. This implies that teachers should attempt to structure more opportunities for student leadership and involvement. Interesting to note as well, one teacher involved in the pilot study hesitated to yell at a student when she realized that it was a log book day. This teacher was aware that the student might record a lessfavorable response toward the class on that day. If the CARE program does have the potential to modify a teacher behavior in a positive way, then its value would be augmented by the number of students who may benefit from an improved student-teacher relationship.

In general, student evaluation of the log book CARE program was positive. Most students felt good about their involvement and progress toward the CARE program goals. The program seemed to work better with some students, and some individuals in particular regarded the opportunity to express themselves as a reward for their good behavior (If text is moved due to editing). Conversely, a few students who had problems interacting in the gym seemed to look upon the log book negatively, as they did not always receive positive reinforcement for their behaviors. And, a weakness of the CARE program may have been its ability to convince some of the

tougher students that it was in their best interests to improve the social climate of the gymnasium. Obviously, definition of positive behavior goals did not guarantee that each student would work toward or attain these goals. And the program did not seem to offer the necessary coping strategies that may have helped the students deal more constructively with their negative experiences in the gym. Future study should address these issues.

Characteristic Make-up of the Four Groups

Discussion of the statistical results gathered from the personal assessment questionnaire forms (A, B, C, D) would be inadequate without a descriptive analysis of the four groups studied. Although it was expected that four groups would be similar at the start of the study, early in the program it was clear to the teachers that there was a marked difference in the maturity level of the four groups. Homogeneity of variance scores did reveal that all four groups were equivalent on the pretest measures for the Physical Education Objectives Assessment (form A), which measured how much physical education helped in terms of physical, cognitive and affective objectives. However, teacher observations indicated that the four physical education classes were different in terms of the student's social behaviors and general responsiveness to school and people. Future studies of this nature should make use of teacher observations in order to ensure that the groups are equivalent prior to assignment of the intervention and commencement of the experiment.

The intervention group (gr log B) had a much higher percentage of socially immature students who had more problems than the other groups. One teacher in the school had described the group gr log B as the "worst class" they had taught in five years. Conversely, the physical education teachers who had implemented the program indicated that the control group students were "exemplary" in their social behavior and

enthusiasm for physical education. They mentioned that this group stood out amongst other grade seven classes in recent years in terms of their responsiveness to each other and the activities in class. The other two groups (gr log A and perf log) seemed to have a mixture of students who were both very mature and socially responsive to others as well as some students who were more aggressive and less responsive to the activities and people in the class. Overall, it was the group gr log B that seemed to have the most difficulty in participating together and interacting throughout school.

Another indicator of the difference between the groups was the percentage of student involvement in interschool sports. According to Hendry (1982), students who participate in interschool sports often possess more positive social traits and express a more favorable opinion toward physical education and physical education teachers. In this study, 4% of the students in group green log B participated in interschool sports, as compared to an average 14% involvement by the other three grade seven classes. Percentage participation in other organized physical activities such as school clubs, intramurals and community recreation and sports was relatively the same for all four groups. It should be noted that only cross country running and volleyball were offered as interschool sports at the time of the participation survey.

The initial difference in the sampling groups (which was highly visible to the teachers) may have weakened this study's attempt to draw legitimate comparisons between groups. However, the distribution of sample groups may have accurately reflected the reality of the educational system. There are sometimes major differences between one class and another. If the social learning log book program proved effective with the difficult intervention group in this study, then very positive support could be forwarded toward using similar interventions with other groups, not with standing the characteristics of the group.

Results from Questionnaires A, B, C, D, E, F

The log book was expected to facilitate a positive change in the social behavior of participating students, thus enhancing a more positive experience of the physical education and school program in general. Rather than using already established affective measurement tools (e.g. self-concept scales), four questionnaires were developed for this study with the objective of evaluating areas of concern appropriate to the uniqueness of the physical education setting. Stoner (1982, p.17) suggested that physical educators need to be more selective in establishing affective objectives, planning instructional activities to attain them, and evaluating both the product and the process. It was hoped that the measurement tools (forms A, B, C, D, E, F) could provide a practical and valid means to assess both the effectiveness of the CARE program in meeting its goals and the status of the affective development in the classroom.

Wiese (1982) had suggested the need for physical education professionals to be more confident in using affective measurement, especially when some of the strongest data based instruments have been reported reliability coefficients in the .80 - .95 range. The questionnaires in this study yielded similar reliability coefficients and were accepted for measurement. As well, the teachers in the study were asked how the groups would score on the questionnaires and were able to predict quite accurately. This added support toward the validity of these new measures.

All but one of the measurement tools were administered after the experimental period. The Physical Education Objectives Assessment Inventory (form A) was given as a pre and post test. This inventory measured how much physical education helped in terms of motor (fitness, skills, games), cognitive (understanding the body, learn how to stay fit) and affective (feel good about yourself, get along with others, have fun) objectives. The pretest measurements attempted to ensure that all students were

equivalent in their previous physical education experiences. As grade seven students are new to Chief Peguis School, they may have participated in different physical education programs which promoted different objectives at their previous elementary schools.

Pretest measurements were not taken on the other inventories (forms B, C, D) as it was perceived that increased awareness alone could effect a change in student behavior (McGee, 1982). Questionnaires B, C and D measured skills directly related to the CARE program objectives. It was thought asking the students how often they are nice to each other was an intervention itself. Randomness of the groups had been expected, but as mentioned earlier in describing the four study groups, evidence suggests that the groups were not similar.

Physical Education Objectives Assessment

Questionnaire A asked students to assess how much physical education helped them in various aspects of motor, cognitive and social development. Hartley's F-Max statistic on homogeneity of variance on pre-test scores indicated that the four groups were equivalent, suggesting that all students had had similar physical education experiences in the past. T-test evaluation of gain scores from pre and post test administrations indicated that the green log B decreased significantly in their perceptions and sport related items, as well as in how much they had fun ($p=0.05$). Green log A and the performance log group also decreased on activity oriented areas (learn how to stay fit, learn how to play sports). Significant changes were not found in any of the other areas (feel good about yourself, get along with others, have fun) at the 0.05 significance level.

Grade seven students at Chief Peguis School move from a more secure physical education environment in elementary school to a new, larger and less secure climate

(ie. the onset of adolescence in grade seven). Considering the increased pressures of adolescence (Robbins, 1983), and a trend for students to report "liking physical activity less" as students reach the junior high level (Hendry, 1982; River East K-12 Physical Education Evaluation, 1984), it was encouraging that students did not decrease more than they did on the nine evaluation items on questionnaire A.

Measurement of between group differences on form A indicated that of the two intervention groups, the green log A group was significantly higher than the green log B group on two items; learn to try new things and how to stay fit. The green log A group was also significantly higher than the performance log group on one fitness related item. Again, considering that teachers had described the green log B group as having tougher students, it was not surprising to see that this group was lower than the green log A group, despite the fact that both groups used the social intervention program. Overall, use of the social intervention log book did not appear to affect positive changes in the way that grade seven physical education students perceive what they are learning in terms of motor, cognitive and social learning objectives.

Assessment of Affective Learning in Physical Education

Questionnaire B asked students to evaluate their own progress toward affective objectives related to the CARE program. All four groups reported positive gains made over the course of the term on all the areas of affective development. Significant differences were not found between the four groups, thus indicating that the CARE program did not influence changes on a group level.

This was not what the researcher expected to find. The social learning log book was expected to increase the student's awareness of his or her own and other people's feelings more than the control groups. The characteristic make-up of the group green log B, which contained many students who had particular problems in

terms of social behavior, might explain why this group was not distinct from the others. In addition, perhaps there "problem" students using the log books were more aware of their negative social behaviors. The weekly presentation of the positive and negative social expectations may have made them more aware of how much improvement they need, and thus their self ratings did not improve any more than the other groups.

Assessment of Liking

Students using the social log books were also expected to increase their liking of school, physical education, their classmates and out of school experiences more so than those who did not use the intervention. Statistical analysis did not support this expectation (form C). Not surprisingly, group green log B liked their physical education classmates significantly less than green log A and the control group. On a positive note, log A liked their classmates and teachers more than the perf log group. However, differences on other items were not found at the 0.05 level of significance.

It should be noted that with the exception of liking school ($M=2.64$ on a scale of 1 to 5), the group gr log B reported average liking scores over the 3.0 level for all other responses (liking of classmates, out of school experiences, teachers). All other groups also responded quite favorably in their liking school, teachers and classmates (means per group were above the 3.0 level). Highest scores on liking were reserved for the physical education teachers and coming to physical education class.

This study attempted to improve an already wellreceived program. A possibility that significant differences were not found between the groups who used the social learning log books as opposed to those who didn't may be that it was difficult to improve a physical education program that students liked. Re-administration of this social learning program in schools where the physical education climate is less positive might leave room for a greater change.

Assessment of Positive and Negative Behaviors

Questionnaire DI and DII measured incidence of positive and negative social behaviors in the time span of one physical education class. Students who used the social learning log book were expected to demonstrate a higher incidence of positive behaviors and lower incidence of negative behaviors. This was not the case. There were no significant differences among any of the four groups on the incidence of negative behaviors. Considering how the group green log B had performed on other measurement tests, this was encouraging.

With regard to the following positive behaviors, (encourage you, ask you for help, ask you to join a game, congratulate you), it was the performance log and group green log B which interacted less frequently than the other groups. Green log B was lower than green log A and the control group in encouraging others and asking for help. Green log B also congratulated significantly less than green log A. Green log B was lower in positive actions on three of the ten items surveyed. One might be inclined to view that statistic favorably considering the performance of this group in other areas. Overall, statistical evidence did not consistently support the use of the social learning log book as an element of behavioral change at a group level.

Teacher Anecdotal Log and Evaluation Interview

The three physical education teachers were asked to maintain a weekly anecdotal log to record significant observations and comments throughout the fourteen week study (form E). As well, they were asked to compare the four study groups in terms of their social behavior and progress in the physical education program (form F). This teacher input provided important feedback regarding implementation and evaluation of the CARE program.

Teacher observations emphasized that some very positive signs did surface on an individual basis. One student in particular, while using the log books, had emphasized that she just couldn't "be good". One month after the experimental period had ended, this same student mentioned how she had improved and that she "doesn't cut anyone down anymore" in physical education. She did, however, admit that she still cuts people down in other classes. When asked why she was "nicer" in physical education, she thanked the teacher for the help she had received in physical education which encouraged her to be nicer. The teachers confirmed this behavior change, and noted that they became aware of this improvement after they had finished using the log books. This evidence supports the notion that positive changes did occur with certain individuals and may continue to take place over time, even though the initial implementation of the CARE program was complete.

On a group basis, the teachers noted that classroom management in terms of communicating expectations of positive social behaviors on a regular basis was improved in both intervention groups gr log A and B. Students often took it upon themselves to enforce standards of acceptable social behavior in games (e.g. "no mouthing off.", "he's not using the goals we set"). An improved social climate in terms of sportsmanship in games was evident, and the teachers attributed this change to the CARE log book.

Another positive element supporting use of the CARE log book program was the incidence of teacher intervention in student conflicts. On five separate occasions throughout the fourteen week study, teachers had to remove students from the two control group classes in-order to resolve student-student conflicts (e.g. fighting). In the two intervention groups, the teachers removed students on only two occasions. There were a total of fifteen students removed from the control groups as opposed to three students in the intervention groups. All the conflicts pertaining to poor effort in

working with teammates or interacting with the entire class. This evidence supports use of the CARE log book as an effective intervention to promote a more positive social climate in the gymnasium.

Overall, the teachers were supportive of the CARE program and hoped to use the social learning intervention with their other physical education classes in the school. They believed that the log book program did make a contribution to the social climate in the two intervention groups. This positive response from a teacher standpoint is crucial. It is the teacher's responsibility to decide what teaching strategies work best in the classroom. Without their acceptance of the social learning intervention in this study, it would be difficult to promote use of the CARE program in other studies, regardless of the statistical evidence gathered in its support.

Factors Affecting Implementation, Evaluation and Results

Time.

A limitation of this experiment was the time frame involved. Behavior change takes time. Previous attempts to modify social behavior and attitudes in physical education settings over periods of time ranging from six weeks to two months (Lindsay, 1984; Orlick et al, 1978; Sander, 1985) have found that adequate time may not have been allowed for necessary changes to surface. Increasing the experimental period in all cases was recommended.

Individualization.

Time may not have been the only factor affecting behavior in this study. As McGee states (1982, p.22), "changes is a slow process, but once a plan is set, change can be monitored. Individual plans require much more time from teachers and coaches. Not everyone will have a selfimprovement plan, and those who do are

involved with different aspects of their feelings". With class sizes as large as they were at Chief Peguis (54 to 75 students), monitoring and reinforcing improvement on an individual basis was difficult.

When the physical education teachers did try to reinforce CARE program objectives on an individual basis, i.e. "be nice", some students responded with "I just can't be good". They became increasingly aware of what the acceptable standards of social behavior were, but admitted difficulty in demonstrating this behavior. A log book intervention that took place on average once per six day cycle for a five minute period may have been inadequate time wise to reinforce a more positive change in a fourteen week period.

Feedback.

Feedback was given to the students on a group basis. If McGee (1982) and Hellison (1987) are correct in stating that different individuals function at different levels, then group feedback as opposed to individual reinforcement may have been inadequate in this study. It was hoped that using log books in the classes at Chief Peguis would ameliorate individual communication between the students and teachers. The students used log books as an outlet for their feelings, but did not receive any written feedback from the teachers. And so, two-way communication was not improved by using the log books. Future studies of this nature should address the need for increasing written feedback to the students.

Implementation.

As stated at the onset of this study, success of the log book intervention program was very much dependant on the effective implementation of the CARE program. As this was an exploratory study, potential problems in the log book administration and management could not be entirely foreseen. Thus, adjustments had



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to be made throughout implementation of the pilot and thesis study. One specific problem was the rigidity of the log book administration schedule. It was difficult to stop an activity with five minutes at the end of class, especially when the students were enjoying what they were doing. The teachers felt that the log book would be better suited were it implemented more on a basis of suitability to the planned activity for the day.

Also, maintaining the large number of log books used by the Chief Peguis students was somewhat cumbersome for the teachers. As DeWine (1977) mentioned, journal use in the classroom can be a time consuming activity for both the instructor and the student. Therefore, the benefits and possible positive outcomes on student learning must outweigh the effort required for using written journals. The teachers at Chief Peguis believed in the value of the log books, and hoped that the time taken to use the log books would be made up for by an improved classroom climate. Eventually, they believed more activity time would be gained as a result of the CARE program.

After reviewing the objectives, implementation and evaluation of the social learning intervention in the Chief Peguis study, other educators have expressed an interest to use similar interventions in other areas of the school curriculum. The CARE program is currently being used by other teachers in the areas of physical education, health, psychology and the academic subjects. The log book format might prove to be more conducive to use in a classroom setting. Obviously, the need for programs to promote social development is pertinent in all areas of the child's development.

SUMMARY AND RECOMMENDATIONS

This study focused on the effects of a social learning intervention program on grade seven physical education students. As planned programs to meet social learning objectives in physical education were not available, a student-centered social learning log book intervention program was designed to supplement the regular physical education program. The objective of the program was for students to "treat each other better" in physical education class.

The social learning book program was developed for this study adhered to recommendations for increased research in the psychological domain for sport based on structural development theory (Weiss and Bredemeir, 1983). The moral reasoning capabilities of the grade seven students (Kohlberg, 1976) were called upon as log book activities challenged students to actively assess their own observations of the social environment in the gymnasium.

A log book framework of self-reporting has been widely accepted as an effective means to improve one's self awareness. Because behavior is seen to be mediated by interaction between the cognitive processes and the external stimuli (Bredemeier and Shields, in press), and increased self awareness is accepted as a potential catalyst for behavior change (Hendry, 1982; Jourard, 1971; Griffen, 1982), the log book program was expected to facilitate a positive change in the social behavior of participating students, thus enhancing a more positive experience of the physical education and school program in general.

An attempt was made to take measurements in the following areas: what was learned in physical education, especially in the affective domain; liking of school, teachers, classmates and out of school experiences; and incidence of positive and

negative social behavior in the physical education class. It was expected that an effective implementation of the log book intervention would increase incidence of positive social interaction in the gymnasium. Students who participated in the log book intervention were expected to demonstrate greater sensitivity toward the feelings of others and greater enjoyment of their physical education and school experiences as opposed to students in the comparison groups.

No conclusive statistical evidence at a group level was gathered to suggest that the social learning intervention had a positive effect on the grade seven students. Conversely, further evaluation of the program from descriptive and qualitative data suggested that a specially designed social learning program grounded in structural developmental principles may have effected a positive change in various aspects of the physical education student's development for certain individuals. More specifically, positive aspects of the program included:

1. The log book format increased student input into setting standards of acceptable behavior, and students took it upon themselves to monitor progress toward working within these standards.
2. The log book format appeared to be an effective communicator of social behavior standards in the gymnasium.
3. The log book format provided individual students with an outlet to express their feelings regarding their experiences in the physical education classes.
4. All students seemed to develop or improve a vocabulary for expressing their feelings.
5. Individual students benefitted from the positive climate promoted by the CARE program.
6. The measurement instruments designed for this study provide for reliable and practical assessment in the affective domain.

Possible reasons that the program did not produce more significant changes as a result of the social learning log book program included:

1. The characteristic make-up of one of the intervention groups which resulted in a higher percentage of students with social problems as compared to the other groups.
2. The main objectives of the physical education program at Chief Peguis school were similar to those promoted by the CARE program. Considering that the students liked their teachers and physical education in general, changes or improvements may have been more difficult to find.
3. The experimental period was not long enough to facilitate a noticeable behavior change.
4. The large class sizes at Chief Peguis school were not conducive to ideal implementation of the CARE program. With smaller classes, teacher feedback to individual students could have been given more often.
5. Students must want to change, or be influenced to do so, if behavior changes are to occur. It was suggested that the conflicting results from the quantitative and qualitative evaluations may be explained in terms of the appropriateness of each measurement in conducting field research. The qualitative analysis appeared to detect the individual behavior change better than the quantitative measurements. When field work study requires a longer experimental period than is possible, qualitative studies might be more useful to detect initial changes that may go undetected by statistical analyses.

Recommendations for Effective Program Implementation

This study was an initial attempt to create a social learning log book intervention program and evaluate its effectiveness in promoting a more positive social

climate in the physical education class. Success of the program was very much dependent upon the effective implementation of the intervention in the classroom.

Suggestions for future use of the CARE program include:

1. Increase the amount of personal, written feedback from the teacher to the student after each daily log book use.
2. Use the log books on days where the scheduled activity can be stopped without much disruption to class management.
3. Use the daily log entries less frequently. Exercises that would promote a greater commitment to behavior change should be developed for use. For example, students should participate in activities that would help them to understand that relating well to others can improve their fun and enjoyment of their class experiences.
4. Use of the CARE program log book in other areas of the school curriculum to reinforce the social learning goals on a school wide basis.

Recommendations for Future Research in this Area

1. Replicate the study in other school environments.
2. Use pretest measurements or qualitative descriptions of the subjects to ensure that all study groups are equivalent in terms of social maturity.
3. Develop other types of planned social learning interventions ;development of a program to enhance the coping strategies of students who participate in physical education programs.
4. Continue to develop and improve measurement instruments .
5. Continue to use qualitative measurements to evaluate effectiveness of field studies.

In conclusion, the need still exists for physical educators to concentrate their efforts toward the provision of positive learning climates in the gymnasium. If education of the total child is to be a reality, physical educators at all levels must prioritize their educational objectives to read "kids first", and plan their teaching strategies accordingly. This study has improved understanding of the complexity of the problems involved when conducting research in the affective domain, and the need for further research and design in applied social learning intervention has been clearly outlined.

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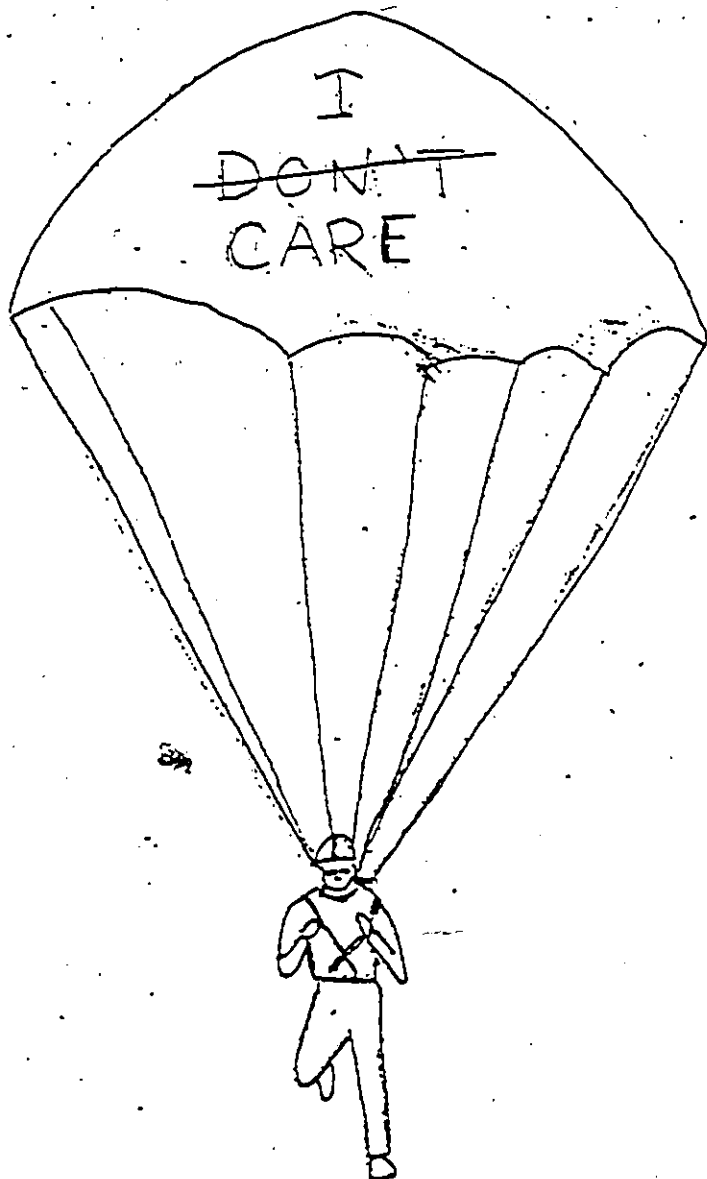
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Appendix A
STUDENT LOG BOOKS

— Social Learning Log Book, The CARE Package, Performance Log Book

CHIEF PEGUIS JUNIOR HIGH



PEYSICAL

EDUCATION

INDIVIDUAL

LOG BOOK

NAME _____

CLASS _____

The CARE Package: Student Log

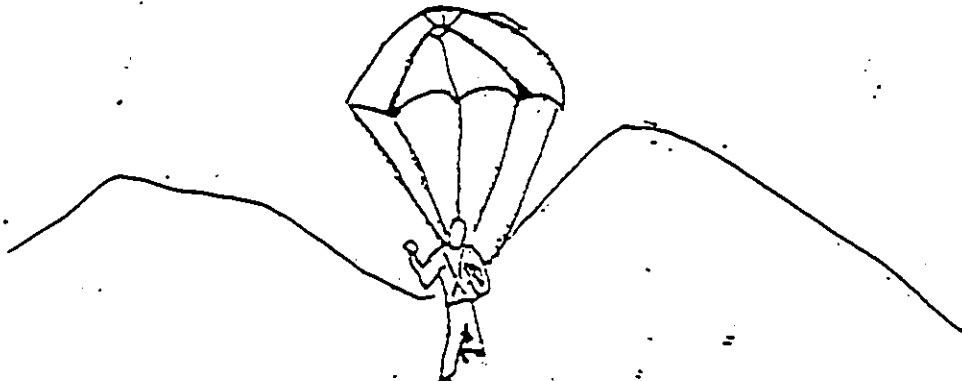
The goal of the physical education program is to have everyone involved in the gym feel good about themselves. The CARE program is designed to meet this objective.

Teachers and students work together toward creating an atmosphere in the gym where consideration for each individual and acceptance of individual differences is promoted.

Students in the program are asked to:

- C - COMMUNICATE consideration for others: by the words you use and the way you speak to others.
- A - ACT appropriately, so as to communicate consideration for others in what you say and do.
- R - RECORD in your log book, which is your own personal record of what you are experiencing in phys. ed. on a day-to-day basis.
- E - EVALUATE progress! What have you gained through your participation in physical education this year? The log book allows you to chart your own progress.

The symbol of the PARACHUTER that appears throughout the log represents the idea of taking risks. It is easy to say "I don't care", whereas it is much more difficult to say "I do CARE". The challenge of this program is to risk a little and say "I care...about myself and others". Just as the parachuter has taken a chance, you are invited to do the same. The choice is always yours.

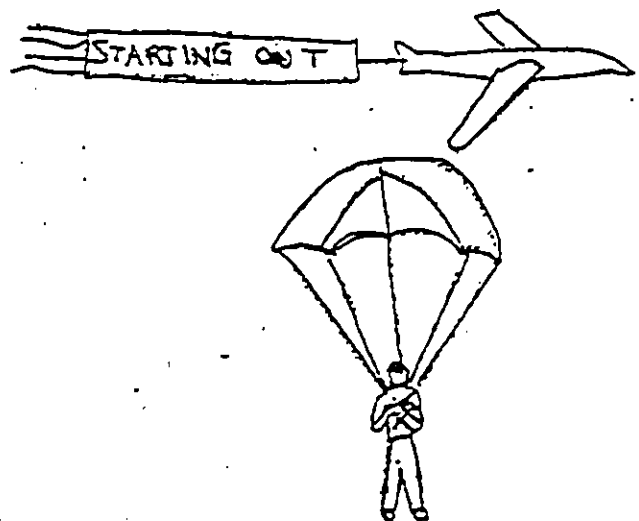


C * A * R * E

Respond to the following, giving as many specific examples as possible...

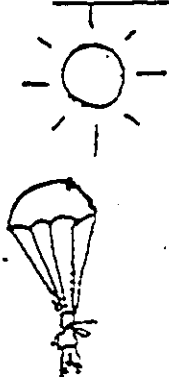
It makes me feel GOOD in physical education when the other kids:

It makes me feel BAD in physical education when the other kids:



CARE PROGRAM GOALS

Looking back at your examples of what makes you feel GOOD and BAD in the gym, write down some specific behavior goals that you can work on as a group and individually in your physical education classes this term.

GROUP:

- 1.
- 2.
- 3.
- 4.
- 5.

CONSIDERATENON-CONSIDERATE

- 1.
- 2.
- 3.
- 4.
- 5.

INDIVIDUALCONSIDERATE

- 1.
- 2.

NON-CONSIDERATE

- 1.
- 2.

COMMITMENT

"Doing your best" requires some form of a commitment. In order to make a commitment you must decide how important certain goals are to you. Knowing how important certain things are to you increases your chances of maintaining a commitment and reaching your goals.

This term, how much can you commit yourself to:

	<u>A</u> <u>Little</u>	<u>A</u> <u>Lot</u>	<u>Completely</u>
1. ...work toward reaching the group and individual social behavior goals that you have set?	_____	_____	_____
2. ...do your best to accept yourself for your individual strengths and weaknesses?	_____	_____	_____
3. ...do your best to accept others?	_____	_____	_____
4. ...record your honest feelings and experiences in the log book?	_____	_____	_____

STARTING OUT



THEN SEEING
IT THROUGH

I, _____
will do my best to maintain the commitments I have stated above during physical education class this term.

Date _____

OBSERVATION EXERCISES

TYPE OF ACTIVITY: Competitive Skill Development
 Cooperative Recreational
 Individual

While watching an activity, write down what actions or responses of others that made the participants feel good or bad about themselves.

FEEL GOOD

Actions(and words)

- 1.
- 2.
- 3.
- 4.
- 5.

Words

- 1.
- 2.
- 3.
- 4.
- 5.

FEEL BAD

Actions (and words)

- 1.
- 2.
- 3.
- 4.
- 5.

Words

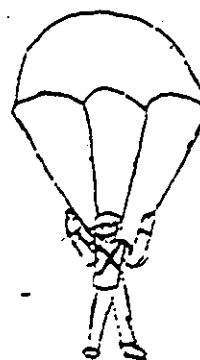
- 1.
- 2.
- 3.
- 4.
- 5.

- A. From what you have observed, what have you learned about how others can affect our feelings?
- B. To help everyone feel better in physical education, what would you suggest doing?

I would like my team members to:

	Not at all	A Little	A fair Amount	A Lot
___ - level with me	___ 1	___ 2	___ 3	___ 4
___ - accept me for what I am	___ 1	___ 2	___ 3	___ 4
___ - feel free to let me know when I bug them	___ 1	___ 2	___ 3	___ 4
___ - be interested in me	___ 1	___ 2	___ 3	___ 4
___ - keep things to themselves to spare my feelings	___ 1	___ 2	___ 3	___ 4
___ - include me in whats going on	___ 1	___ 2	___ 3	___ 4
___ - recognize readily when something is bothering me	___ 1	___ 2	___ 3	___ 4
___ - respect me as a person	___ 1	___ 2	___ 3	___ 4
___ - respect my abilities, weak or strong	___ 1	___ 2	___ 3	___ 4
___ - ridicule me if I show any peculiarities	___ 1	___ 2	___ 3	___ 4
___ - provide an atmosphere where I can be myself	___ 1	___ 2	___ 3	___ 4
___ - misunderstand things I say	___ 1	___ 2	___ 3	___ 4

INTERACTING
WITH OTHERS



PHYSICAL EDUCATION LOG ENTRIESDATE: _____

Has anyone done anything in class today to make you feel GOOD about yourself? What was it?

Has anyone done anything in class today to make you feel BAD about yourself? What was it?

What have you done to make someone feel good?

Have you done anything that might have made someone feel bad?

Today was a 1 2 3 4 5 6 7 8 9 10 day!

lousy

so-so

great

CLASSMATE OBSERVATION SHEET

In class today . . .

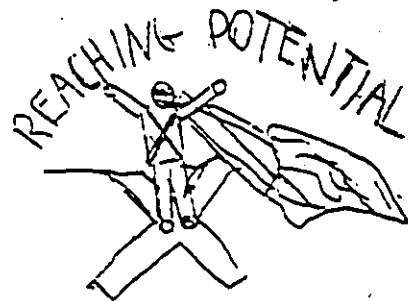
	/	/	/	/	/	/	/
1. Did something to me me feel GOOD							
2. Did something me make me feel BAD							
3. I did something to make _____ feel GOOD							
4. I did something to make _____ feel BAD							

Directions:

- A. Put the names of the classmates that you h-ve interacted with in class today above each column.
- B. Put a checkmark in the appropriate box if a classmate's or your own actions matched the stated behavior.

CARE Program Wrap-Up

Looking back on the goals you set as a group, and individually, how do you feel about your progress at this point in time?



What do you think about the log book? (Was it useful? Easy to use? Did it help you in any way...?)

Any suggestions or comments on the program?

****. Your feedback matters most in using this program... what you contribute here will impact the people who use the program in the future. Thanks for you input!

CHIEF PEGUIS JUNIOR HIGH

PHYSICAL

EDUCATION

INDIVIDUAL

LOG

BOOK

NAME _____

CLASS _____

The physical education department offers a wide variety of activities and opportunities that will hopefully contribute to a fun and interesting school year. All students are welcome to join clubs, try out for school teams, participate in intramurals and make the best of the phys. ed. program as is possible.

It is fairly easy to try new things and to play games and sports if you are already good at them. The real challenge is to try and improve in areas you are less familiar with, or less talented at. Take the CHALLENGE and you may surprise yourself at uncovering a lot of unknown potential.

Respond to the following, giving as many examples as possible with regard to your physical fitness and skill level!

My strengths in physical education are:

My weaknesses in physical education are:

GOALS

In order to make the best out of this year in physical education, all students are encouraged to set individual goals so as to benefit the most from participation in class.

Looking back to page 1 where you have listed some strengths and weaknesses in physical education, choose three specific areas that you would like to improve upon this year:

- 1.
- 2.
- 3.

COMMITMENT

This year, how important it is to you

..... work toward reaching the individual goals that you have set?

A Little

A Lot

Completely

..... record your honest progress in your log books?

A Little

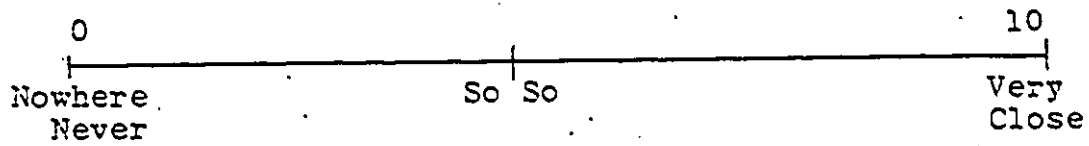
A Lot

Completely

I, _____
will do my best to maintain
the commitments I have stated
above during physical education
class this year.

Date _____

How close are you to reaching your personal goals in Physical Education?



What can you do to improve your progress toward reaching the personal goals that you have set?

PHYS. ED PROGRESS REPORTS

100 km Club Log:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

12 Minute Run Times:

Sept _____	Dec _____	March _____	June _____
Oct _____	Jan _____	April _____	
Nov _____	Feb _____	May _____	

Strengthalon:

Sept _____	Dec _____	March _____	June _____
Oct _____	Jan _____	April _____	
Nov _____	Feb _____	May _____	

List your involvement in school clubs and teams:

Appendix B

GUIDELINES FOR LOG BOOK IMPLEMENTATION

Social Learning Log Book, The CARE Package Performance Log Book



Appendix B: Teacher's Guide to the Student Log Book Intervention Program

A. The CARE Package: Student Log

COMMUNICATE * ACT * RECORD * EVALUATE

Input 1

1. Hand out log books (have pens or pencils on hand or remind students to bring some with them to class).
2. Take a few moments to talk about the CARE Program, which is specially designed to improve and promote positive social interaction in physical education classes. Its basic goal is to make physical education students feel better about their experiences in the gym. This is achieved by the students treating each other better. In the gym, individual strengths and weaknesses are obvious and freedom to interact is frequent. For example, what does it feel like to be picked last for a team? Or laughed at when you serve the volleyball into the net? Or to have to change in front of others at the beginning and end of the class, especially if you don't feel too good about your body? These problems exist in phys. ed. And yet, students can decrease the stress involved by becoming more aware of what problems do exist, and treating each other with greater acceptance so as to remove the stress. The CARE Package helps students do this.
3. Turn to the first page. Read through with students, asking for feedback.
4. Explain the general purpose of the log books:
 - a) To record the student's experiences in the gym.
 - b) To serve as an on-going reference between teachers and students that the CARE program objectives are being met.
 - c) To record progress for assessment of the program.
5. Have students turn to page 1 (C*A*R*E) and complete the form. Give them examples and help if they need it. Explain that these responses are important and will be used to direct the target focus of the program.

Some examples of...

- a) Things that make me feel GOOD: being encouraged by others; being invited to participate; getting a pat on the back; having someone help me with a skill....
- b) Things that make me feel BAD: name-calling; being laughed at or joked about; being pressured to perform well, or do something I don't feel good about...

6. Collect log books.

Input 2

1. Hand out log books.
2. Discuss responses from page 2; write down on the blackboard the specific behaviors that seemed to occur frequently.
3. Turn to page 3. From the list of behaviors that made students feel either good or bad about themselves, have students choose five positive (considerate) target behaviors, and five negative (non-considerate) target behaviors, and have them record these responses in the log book. These target behaviors represent the group goals that students choose to work on to either increase (positive, considerate behaviors) or decrease (negative, non-considerate). Record these goals on poster paper so as to be able to chart group progress as the program progresses.

Secondly, have students write down two individual goals each for positive and negative behaviors. These are target behaviors that students feel pertain more directly to their own feelings about interacting socially with others in the gym.

4. Turn to page 4, and have students complete the commitment form. Students should sign the bottom as a statement of their intent to work toward the CARE program objectives.
5. Collect log books.

Input 3

1. Hand out log books.
2. In an active class discussion, build upon the social behavior goals that the class has targeted. Remind students of the potential stressors in the gym (see page 2 of the log books). Ask Students:
 -why do you like to play games? phys. ed.?
 -what don't you like about games? phys. ed.?
 -do you think it might be worthwhile to set rules for social behavior in games?
 ...record these rules.
3. Turn to page 5 (observation exercises). Explain to students that they are to watch a game or activity when they are not actively participating and record the specific social behaviors that they see happening.

Begin the planned activities for the day (eg. basketball games). Students who are waiting their turns to participate fill out the behavior observation sheet.

Students who have finished participating and have completed the behavior observation exercise, are to complete page 6. (I would like my...) or page 7 (classmate observation sheet). These forms are used to evaluate the games in terms of CARE objectives, and to reinforce the targeted social behaviors.

Note: dependent on the length of the activity unit, size of class, and actual class time available to complete the observation exercises, students may take a few days to complete this portion of the program.

1. At a designated period each school cycle (eg. day 3, period 1), have students record their personal experiences on page 7 (physical education daily log entries). This form will serve as an on-going reference with regard to progress toward the CARE program social objectives that students have set at the onset of the program.

A variation to the log entries may be used (page 8) as a reinforcer on the days designated above.

Allow approximately five minutes at the end of each designated period for students to fill out page 7.

Ask students, as they leave the gym, if they have completed the form. Do a brief survey of the completed forms to ensure that students are filling them in properly. Students have made a commitment to fill out the logs and should not have problems in maintaining this agreement.

Final Input

1. Have students complete the final wrap-up form (page 10).
2. Discuss with the students your own feelings with regard to their progress in the class and in their log books. Thank them for the effort they have put in to fill out the forms and remind them that their input is extremely valuable.

Appendix B: Teacher's Guide to the Student Log Book Intervention Program

B. PERFORMANCE LOG BOOKSInput 1

1. Hand out log books.
2. Take a few moments to talk about the physical education program. Emphasize that each student is encouraged to benefit as much as possible from their participation in physical education this year.
3. Read through page 1 and have students complete this form.
eg. Strengths: running, basketball, flexibility
Weaknesses: sit-ups, overweight, running fast
4. Turn to page 2. Have students complete the questions.
5. Collect log books.

On-going Input

1. Hand out logs.
2. Have students record their personal progress in the gym as they complete the activities listed on page 4.

Final Input

1. Hand out logs; turn to page 3.
2. Have students mark an X where they feel they have progressed toward the goals that they have set for the year.
3. Encourage students to make the best of the time that remains during the school term in physical education and wish them luck.
4. Collect log books.

Appendix C
MEASUREMENT INSTRUMENTS

Form A, Physical Education Objectives Assessment

Form B, Personal Assessment of Affective Learning in Physical
Education/Participation Survey

Form C, Personal Assessment of Liking

Form D, Assessment Questionnaire for Positive and Negative Social Behavior

Form E, Teacher Anecdotal Log/Log Teacher Intervention in student-student
conflict

Form F, Teacher Evaluation Interview

CHIEF PEGUIS JUNIOR HIGH

HOW MUCH DOES PHYSICAL EDUCATION HELP YOU TO:

	<u>Not At All</u>	<u>A Little</u>	<u>A Fair Amount</u>	<u>A Lot</u>
1. Learn and practice new skills	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
2. Learn how the body works	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
3. Feel good about yourself:	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
4. Develop personal fitness?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
5. Learn how to play sports and games?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
6. Get along with others?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
7. Try new things?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
8. Learn ways to stay fit?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
9. Have fun and enjoy yourself?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>

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B. I. IN YOUR PHYSICAL EDUCATION CLASSES THIS TERM.

	Less Aware					Same					Much More Aware		
1. Did you become any more or less aware of the feelings of others?	3	-	2	-	1	-	0	+	1	+	2	+	3
2. Did you become any more or less aware of your own feelings?	3	-	2	-	1	-	0	+	1	+	2	+	3
3. Did you become any more or less aware of how your actions can affect others?	3	-	2	-	1	-	0	+	1	+	2	+	3
4. Did you become any more or less aware of how the gym can be a less threatening environment to be in?	3	-	2	-	1	-	0	+	1	+	2	+	3

Check off the activities that you are involved in this year:

Interschool Team

School Club

Intramurals

Community Sports or
Recreation

CHIEF PEGUIS JUNIOR HIGH

B. II. OVER THE COURSE OF THE TERM, DID YOU EXPERIENCE ANY CHANGES IN YOUR ABILITY TO:

	Got Worse				Same				Much Improved				
1. Accept yourself?	3	-	2	-	1	-	0	+	1	+	2	+	3
2. Accept others?	3	-	2	-	1	-	0	+	1	+	2	+	3
3. Enjoy yourself and have fun?	3	-	2	-	1	-	0	+	1	+	2	+	3
4. Cooperate with your classmates?	3	-	2	-	1	-	0	+	1	+	2	+	3
5. Help others to learn new skills or try new activities	3	-	2	-	1	-	0	+	1	+	2	+	3
6. Resolve problems agreeable with your classmates?	3	-	2	-	1	-	0	+	1	+	2	+	3
7. Encourage other students?	3	-	2	-	1	-	0	+	1	+	2	+	3
8. Accept responsibility for your actions?	3	-	2	-	1	-	0	+	1	+	2	+	3
9. Express your feelings?	3	-	2	-	1	-	0	+	1	+	2	+	3
10. Be considerate of your classmates feelings?	3	-	2	-	1	-	0	+	1	+	2	+	3

CHIEF PEGUITS JUNIOR HIGH

C. THIS YEAR, HOW MUCH DO YOU LIKE:

	Not at All				A Lot
1. coming to school?	1	2	3	4	5
2. coming to phys. ed class?	1	2	3	4	5
3. your classmates?	1	2	3	4	5
4. your phys. ed. classmates?	1	2	3	4	5
5. to spend time with your friends from school after school hours?	1	2	3	4	5
6. to be physically active outside of school?	1	2	3	4	4
7. to participate in school-sponsored physical education activities?	1	2	3	4	5
8. your teachers?	1	2	3	4	5
9. your phys. ed teachers?	1	2	3	4	5

Thinking back on the events of the past class, from the moment you arrived in the changerooms and up to this point, respond to the following as accurately and as honestly as possible:

D. I. DURING THIS PHYSICAL EDUCATION CLASS, HOW OFTEN DID YOU:

	Never		Sometimes			Very Often
... encourage someone to do well?	0	1	2	3	4	5
... laugh at someone?	0	1	2	3	4	5
... ignore someone?	0	1	2	3	4	5
... compliment someone?	0	1	2	3	4	5
... pick on someone?	0	1	2	3	4	5
... call others names that really hurt?	0	1	2	3	4	5
... ask someone for help.	0	1	2	3	4	5
... show off?	0	1	2	3	4	5
... ask someone to join a game?	0	1	2	3	4	5
... congratulate someone?	0	1	2	3	4	5

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D. II. DURING THIS PHYSICAL EDUCATION CLASS, HOW OFTEN DID ANY OF YOUR CLASSMATES:

	Never		Sometimes			Very often	
. . . encourage you?	0	1	2	3	4	5	
. . . laugh at you?	0	1	2	3	4	5	
. . . ignore you?	0	1	2	3	4	5	
. . . compliment you?	0	1	2	3	4	5	
. . . pick on you?	0	1	2	3	4	5	
. . . call you names that really hurt	0	1	2	3	4	5	
. . . ask you for help	0	1	2	3	4	5	
. . . show off?	0	1	2	3	4	5	
. . . ask you to join a game?	0	1	2	3	4	5	
. . . congratulate you?	0	1	2	3	4	5	

Form E

Teacher Anecdotal Log:

please record any significant events, personal observations and/or comments regarding program management and progress. (It is a good idea to record any information as it occurs, and to do a weekly update on every third physical education class).

Log of teacher intervention in student-student conflict:

please record the date, number of students involved and reasons for the conflict whenever it is necessary to resolve student - centered conflicts by taking the students aside (ie. away from the other students) in order to speak to them.

For the above, please keep a separate log for each of the four grade seven classes.

Teacher Interview Questions

Over the fourteen week duration of the intervention program, what changes did you notice in the social interaction of the students who received the log book intervention program?

Could you compare the the social behavior of the log book intervention group to that of the control groups?

Overall, how effective do you feel the log book intervention program was?

What recommendations would you make were you to use the log book program again?

Appendix D
PILOT STUDY RESULTS

Spearman rho test-re-test reliability scores for questionnaires A, B, C, D (General Wolfe School)

Five week pilot study summary results (Gordon Bell School) Student Responses to CARE (South Carlton High)

A. RELIABILITY MEASURES - General Wolfe School, Winnipeg, May, 1986¹²⁰

Test-Retest Reliability Co-efficients for each questionnaire administered to Grade 7 students at the beginning and end of one class period

Table 1 FORM A

		<u>SPEARMAN (rho)</u>
n=22	1	.993
	2	.988
	3	.993
	4	.996
	5	.984
	6	.991
	7	.982
	8	.986
	9	.996
	Total (1-9)	.9995

Table 2 FORM BI and BII

BI		<u>rho</u>
n=30	1	.997
	2	.995
	3	.982
	4	.981
BII	1	.991
	2	.982
n=30	3	.982
	4	.986
	5	.981
	6	.978
	7	.989
	8	.984
	9	.983
	10	.984

Table 3 FORM C

		<u>rho</u>
n=30	1	.998
	2	.995
	3	.995
	4	.994
	5	.993
	6	.994
	7	.997
	8	.993
	9	.9996

Table 4 FORM DI & DII

121

DI		<u>rho</u>
n=22	1	.993
	2	.971
	3	.994
	4	.974
	5	.992
	6	.987
	7	.984
	8	.982
	9	.996
	10	.992
DII	1	.964
	2	.970
n=20	3	.993
	4	.944
	5	.995
	6	.982
	7	.987
	8	.992
	9	.990
	10	.954

The 7 week initial implementation of the log book program went smoothly in terms of classroom management. It used little class time, and log books were easily distributed, filled out and collected.

The subjects were very good to work with, and had little difficulty in understanding the goals of the program. However, comprehension was most difficult for the ESL students, and a written log book is not the best intervention for this group.

Student evaluation was very positive toward the program, and the majority seemed quite pleased with their progress toward meeting the program's goals. It should be noted that individual student response varied, indicating that this type of intervention may work better for certain individuals as compared to others.

Statistical results indicate that positive gains may have occurred in the student's subjective feelings about themselves ($t=2.50$, $df=21$, $pr>0.05$), and in their ability to express their feelings ($t=2.86$, $df=32$, $pr>0.05$). As both these areas conform to physical education objectives, support is given toward use of the log book as a supplement to the regular physical education program.

Finally, the evidence given by both teachers that their own behavior may have been influenced positively by using the log book indicates that this type of intervention may be very effective if implemented at this level. A complete evaluation of the 14 week thesis study should provide further support here.

Recommendations

- 1) Fill out Daily Log forms only once/week (as in thesis study).
- 2) Continue to report progress toward Individual and Group Goals on a class - class basis. eg. "We're still having people feeling bad in our class ... what can we do?"
- 3) Use log book for a longer duration.
- 4) Have students sit apart while filling out forms (privacy of responses).

It makes me feel GOOD in physical education when the other kids:

- compliment me
- help me
- congratulate me
- play with me
- I win
- see others do well
- when someone improves their goal
- when they become better at an activity
- when they try even if they don't like it
- people say, "boy, you're really good at that"
- when we get to do fun things
- tell someone they did something good
- seeing everyone getting along and participating
- seeing everyone having a partner or friend
- someone sticks up for someone else
- when I do good in competition
- cheer you on
- when you are accepted in a group
- I get picked at the start for teams
- ask me to join a game
- when I can do something better than everyone else
- when the kids encourage someone who can't do something
- work together with me
- when everyone comes out even
- when you're at about the same physical stage
- not bug me
- cooperate
- have fun
- defend someone who's being picked on
- learn from things I do
- when others do better than me so I have a goal to do better
- ask me to do it
- ask me how to do it
- people are impressed when I do something good
- when nobody boo's when I get picked for a team

South Carlton High School, Ontario
April, 1986

Pilot study student responses to CARE Package question 1

It makes me feel BAD in physical education when the other kids:

- don't bother with me
- laugh at you
- pick on me
- when others don't even try an activity
- tell something I did wrong that I know I did wrong
- "you can't do it"
- get higher scores than I do and rub it in
- tease me (about my size)
- pick me last for a team
- seeing someone left out
- when people watch me and only pick out the bad things, not the good
- don't try to have fun
- avoid me
- hit me where it hurts
- when people leave you out of games
- when people don't encourage you
- pressure you to do something
- put someone down or laugh at the way they do something
- my team loses
- don't throw the ball to me
- show off
- when I see other kids laughing at a kid who can't do something
- do stupid things
- start a fight
- kids laugh at my shorts
- brag about how good they are
- when other kids want to pinch hit
- laughing at someone else when he doesn't even participate himself
- don't give me a chance to participate, like volleyball when I haven't even played before
- teacher expects too much from me
- make fun of you for screwing up
- I missed the ball and everyone got mad
- mock me after I have lost
- call others names that really hurt

Appendix E
QUALITATIVE DATA

Teacher Anecdotal Log Teacher Interview Questions and Responses

Day 1: Intro and log books (pages 1 & 2); Intervention groups 71-3/72-3 (gr log B) and 71-4/72-1,4 (gr log A); Performance log books 71-2/72-2; Control group 71-1,5/72-5

All classes go well.

Day 2: Logs (pages 3 & 4); Students respond well to the group goals form and offer their own responses readily.

Intro: Two days (out of three) the first week one day per cycle this point forward

Day 3: First day daily log form (page 7); Responses are 50/50; Students were too rushed at the end of the class; Student demonstrators circled 10's at bottom of page

Week 2: A student who transferred from a performance log book group to a social objectives log book noted non-chalantly, "Hey, aren't these supposed to be pink?" No one seemed to pay attention. Matter of fact, the students haven't seemed to notice that one group is doing something different than the other group ... they just seem to take it all in stride.

Boys talk about goals in the warm-up, eg. "No mouthing off" ...

Week 3: Students in intervention groups refer to the group goals they have set during their football games; eg. "Hey there's no put downs allowed", "He's not playing fair or using the goals we set".

Incident with one student in intervention group who does not want to try ... "Phys. Ed. sucks, etc." Serious fight between two students in control group. One student has been picked on in all his classes, and another student was pressured into fighting him. The parents are contacted and are pleased with the way the situation has been handled. We talk to the whole group about the situation the next day. As a class, the students respond well toward helping the one student feel more accepted. Some follow-up problems with this one student as he avoids participating and brings on a lot of his problems himself.

Week 4: Gr log A group has problems in the game (due to lop-sided scores and uneven competition); as a group we sit down at end of class and discuss the problems and suggest ways that we can resolve them. Students encouraged to write down any recommendations to improve the game next time around. One group of students were angry when a game was stopped short in order to record on the daily log form (should the use be more incidental?)

The two control groups participate very well together in warm-ups and games. A nice group of kids who really get along well together, especially in the larger class.

Week 5: One student crying about his lack of skill in volleyball ... his class could have used a log book.

All classes seem to be going well, despite the daily problems with one group of boys in the intervention group (constant complaining about a variety of things).

Too many "No, yes, no, yes" responses in the daily log form. Make sure to reinforce the need to put in full responses.

We remind the entire group about their own goals and their progress thus far.

Week 6: Volleyball inter-squad games begin. One group in control classes has a definite problem playing together. The same group of boys in gr log A have problems re:- competing together. One student reminds the group of the "no mouthing off" rule, without us saying anything. The girls in gr log B certainly have their own problems in class, especially one squad. One student in particular, when reminded of the CARE program goals she set says, "I know, but I just can't be good". A good point to note. Another student in the same class who has had many problems in the past and is repeating the year seems to be doing very well. Despite one incident the second day while filling out the log books, he has done very well and has been well accepted by the other kids ... which is ~~very~~ encouraging.

Four squads per day fill out the game observation form when they are not playing. Students respond very well to this form. Note: use cues like; "this is your chance to be a detective ... don't let anyone know that you are watching them".

Week 7: Continue use of the game observation form (page 5).

Week 8: Games are ending up well. All students have completed page 5. Follow-up with page 6 (teammate form). After reading the responses to page 5, we let students in intervention groups know that there are still some negative things going on, and we want to decrease them. With every negative note, add a positive one; ie. "But we're not doing too bad and there are lots of good things going on out there".

For the playoffs we tell all four classes to make sure and shake hands at the end of the game. All groups respond well to that.

Week 9: Kids do well with the daily log book form (page 7). It is easier to use the log books when we're doing a unit that requires using a pencil (eg. weight training).

Week 10: Amazingly, group gr log A shake hands on their own at the end of a lop-sided game.

Week 11: The last daily log book interventions. Kids are tired of doing the page 7.

Week 12: End of term one, and time to pick new squads. The control groups are nice to each other. Some of the kids in the intervention groups have problems in picking players. We again remind them of their log book goals.

Week 13: Final wrap-up of log books. Kids respond well to the final page.

Week 14: All groups fill out the questionnaire forms A, B, C, and D without any difficulty. Two kids in the control group get into a fight as we're collecting the papers.

Overall, the program covered nine six-day cycles from August 28 to December 4. Students filled out a log book form an average of one time per cycle. Due to interruptions in the school timetable (eg. administration days, special events), students sometimes missed a regular log book day. To compensate, the next best day to fill in the log books was used (ie. not always a Day 3). Administration of the log books went well when considering the class sizes (ranging from 50 to 75) and the extra responsibilities of the teachers in implementing the program.

B. Teacher Interview Questions and Responses:

1. Over the fourteen week duration of the intervention program, what changes did you notice in the social interaction of the students who received the log book intervention program?

71-3/72-3 Green log B

There was individual improvement of the problem kids among the boys, especially in accepting the one student who is a repeater. There is still a few problems in terms of the girls showing off. And amongst the girls, they are very much aware of what is expected of them in terms of being nice to others, yet they still have the occasional problems in putting what they know is right into practice. After the program ended, one of the girls who had to be consistently reminded of the C*A*R*E program goals said that she had improved ("I've improved, I don't pick on anyone anymore"). She just might be right, as no one has complained about her lately. However, her friends did point out that she is still bugging other people in other classes ("but not in Phys. Ed!"). That news is somewhat encouraging, at least it's a start.

71-4/72-1,4 Green log A

The girls were great. They seemed to get better as they got to know each other. They cheered each other on, and helped each other out. Especially the ESL kids, they accepted them. They checked on each other when they weren't playing. As for the boys, there seemed to be a definite improvement in their sportsmanship. From the start, this group had problems with any games or competition, but they did refer to the program goals and got after each other when they weren't playing in a sportsmanship way. A few kids still have some problems but they have improved.

2. Could you compare the social behavior of the log book intervention group to that of the control group?

The boys in 71-2/72-2, the performance log group did have problems with team play, and this continued through the term. The girls were excellent, and exceptional in their enthusiasm for Phys. Ed. In 71-1,5/72-5, the control group, the entire class is great. The girls help out the one handicapped girl in the class without any problems. And the boys must be "genetically perfect" ... they cheer each other on, help each other out etc. After the final testing, we were able to do an impromptu 'cooperative games' class, and the kids loved it. Other classes might have had difficulty in that. It's hard to compare them because the control group class is really good, and it stands out in terms of other grade seven classes we've had throughout the years, especially last year's.

3. Overall, how effective do you feel the log book intervention program was?

It's worthwhile. It's very good in setting out goals and reinforcing them. It spells out what is acceptable and makes the kids realize what they're doing or not doing on a regular basis. It's almost a reward for some who saw it as a good chance to express themselves. Like most things, it works better for some

than for others. One thing, kids want to play in Phys Ed., and it's tough to stop a game and get them to write in their books. Sometimes you feel bad when you cut into physical activity time. Yet, if it's going to help, and it's going to make the games better in the long run, then it's worth it. Not everyone likes the 12 minute run, but we do that because it conforms to our objectives. So does the log book. What will be interesting is to see what long-term effects it has on the students who used it. A lot of kids say it helped them become more aware of what they're doing, yet they still do it because they always have and "can't change". Maybe now that they're thinking more about what they do, and are more aware of what is going on around them, which they are, they'll be more inclined to change their behavior. If anything, we'd use the program again.

4. What recommendations would you make were you to use the log book program again?

We'd change the one form, the daily log form; change the wording so that it's not so repetitious for variety sake alone. Use a bound book. Make more use of it in smaller groups where you could talk to the kids better. Make more incidental use of the program. For instance, at the end of a particularly bad game, or on a day when the activity is more suited to using pens and pencils. Maybe build in a pencil into the book. Increase feedback to the whole group, but more importantly, to kids on an individual basis. It's so easy to forget to say anything. And increase the time we use to give out the books, so it's not so rushed.

Appendix F

DESCRIPTIVE RESULTS FROM CARE LOG BOOK

Page 2, List of Students responses to questions

"what do other kids do to make you feel good/bad
about yourself?"

Page 3, Frequency of student responses (male/female per group)

when asked to set individual social behavior goals

Page 7, List of student responses to question

"in physical education today":

- A. 'Did anyone do anything to make you feel good'
- B. 'Did anyone do anything to make you feel bad'
- C. 'Did you do something to make someone feel good'
- D. 'Did you do something to make someone feel bad'

Page 10, Student responses to CARE program wrap-up

evaluation

Page 2

Feel Good Responses

Cheer me on
Don't put me down
Help me
Encourage me
Share
Are nice to me
Pick me first for a team
Want me to be on their team
Include me in on activities
Cooperate
Praise me for my efforts
Pick me for their partner
Help others
* Don't cheat
Say hi to me
Don't pressure me
Don't make fun of others
Are considerate of others
When we all have fun
Get along together
Try their best
Don't make fun of me
Feel good

Feel Bad Responses

Put me down
Don't cooperate
Laugh at me
Call me names
Start fights
Push me around
Don't help me
Pick me last for a team
Don't pick me for a partner
Hog equipment
Push me to do something I can't
I never feel bad in gym
Don't include me in activities
Brag
Cheat
Yell at me
Do good and I don't
Don't talk to me
Get mad at me
Get mad at others
Don't try hard
Steal or ruin belongings
Grab things from me
Don't accept me the way I am
Pressure me
Don't cooperate

Frequency of Responses; Male and Female for Each GroupBehavior Goals

71-3

71-4

Considerate

Male

Female

Male

Female

Congratulating	0	0	9	5
Be a good sport	0	0	6	10
Complimenting	11	11	12	5
Make friends	1	0	8	9
Include everyone	0	10	3	5
Encourage others	0	0	0	3
Help others	7	12	0	3
Being Nice	2	0	0	1
Trying hard	1	0	2	0
Involve myself	0	0	5	0
Respecting others	0	0	1	0
Not making fun	0	0	1	0
Set goals	0	0	1	0
Being friendly	0	9	0	0
Saying thank you	0	1	0	0
Sharing	1	0	0	0

Non Considerate

Male

Female

Male

Female

Name calling	9	12	11	3
Not listening	0	0	8	6
Complaining	0	0	6	6
Showing off	0	0	6	2
Laughing at others	9	23	7	3
Teasing	0	0	0	1
Fighting	8	4	1	2
Not trying things	0	0	1	0
Thinking I can't do things	0	0	1	0
Yelling	0	1	2	0
Bugging others	0	0	1	0
Bragging	0	0	1	0
Being mean	0	1	0	0
Swearing	6	2	0	0
Being rude	1	0	0	0
Chewing gum	1	0	0	0
Cheating	1	0	0	0

A. Student responses to daily log entry 'did anyone do anything to make you feel good?' (page 7).

- I got a partner
- I got to demonstrate
- kids were impressed that I could do the splits
- a girl complimented my hair
- everyone was nice to me
- someone ran with me
- someone stood up with me
- everyone was in a good mood
- they included me
- they cheered when I was demonstrating
- someone let me borrow something
- someone complimented me
- just the warm-up made me feel good
- I got two touchdowns
- I finally got the ball
- someone made me laugh
- I got to be quarterback
- I shook hands with someone
- someone passed the ball to me
- they let me do something for the team
- I got included in volleyball
- I saw my friend
- I helped Mr. Hector and the lady teacher with volleyball
- I shared
- yes
- no

B. Student responses to daily log entry 'did anyone do anything to make you feel bad?' (page 7).

- someone said I was stupid
- kids were fooling around too much
- someone got mad at me
- someone said I was a liar
- I was sick and everyone said I was lying
- telling me to try harder.
- someone was bugging me
- nobody wanted to be my partner
- someone was complaining
- not including me
- someone told me I was ugly
- someone called me a preppie
- we never pick good teams
- kids made fun of me
- kids said I cheated
- someone put our team down
- some kids wouldn't include me in their conversation
- someone punched me
- I always forgot about myself
- people were talking behind my back
- someone laughed at me
- I didn't get included in games
- yes
- no

C. Student responses to daily log entry 'did you do anything to make someone feel good today?' (page 7).

- I gave someone gum
- I was nice
- I asked someone to be my friend:
- I complimented someone
- I helped someone
- I ran with someone
- I included everyone
- I lead the workout
- I was their friend
- I didn't bother anyone
- I cheered other kids on
- talked to others
- I said I wanted to be their partner
- I was cheerful
- I told our class some good news
- I cooperated
- I chose someone else for class president
- yes, I lent something to someone
- yes
- no

D. Student responses to daily log entry 'did you do anything to make someone feel bad today?' (page 7).

- I pushed someone
 - I made someone mad
 - I punched someone in the stomach
 - I told someone to shut up
 - I don't think so
 - no
- 

CARE Program Wrap-up Evaluation (page 10)-- Student Responses

1. Looking back on the goals you set as a group, and individually, how do you feel about your progress at this point in time?

- I think I have improved
- it was good
- I think I did great
- I've done pretty well
- its really getting better
- we didn't have any progress to make
- I feel good
- I think we made a lot of progress
- I didn't have to change because I've always been nice
- okay
- my progress at this point is really good
- its nice being on a team that doesn't get mad at you
- I think I met my goals
- I stayed about the same
- its pretty good
- I'm happy
- not bad
- I feel good about our progress
- stupid
- I really learned something and had fun
- I feel I made new and interesting friends
- I don't think I made anyone feel bad
- I think I'm wonderful
- I think I tried
- I feel fine
- we did good
- it is great
- okay, but I could have done better
- I don't know
- it was nice
- a little better
- not so good
- it is really good
- gym is a relating subject

CARE Program Wrap-up Evaluation (page 10) - Student Responses

2. What do you think about the log book? (Was it useful? Easy to use? Did it help you in any way...?)

- I liked the questions that were asked
- it was easy to use
- it didn't help me in any way
- it was okay
- it helped a bit, but the page 7's weren't of any use
- it helped me
- it was useful
- it was interesting
- we shouldn't have to write our feelings down, we should just tell our friends or family
- I don't know
- it helped to write instead of just talk about it
- it was a good idea
- it was easy to understand
- it was okay but it took up alot of time
- it was boring
- it helped me to have more fun
- I don't like it
- it was good to look back to
- I think its fabulous
- it was great to write down our feelings instead of yelling at our teammates
- it didn't help much, I was still criticized
- we didn't need it
- it was helpful

CARE Program Wrap-up Evaluation (page 10) - Student Responses

3. Any suggestions or comments on the program?

- the book should be used after every game
- make it more interesting
- it should be used every year
- let us do more by ourselves
- it helps to understand our goals more
- you should have only had pages 2 through 6
- its a good program
- use better stuff
- make the program longer
- we shouldn't have log books
- its hard to make friends