

A Case for Peers
by Bonnie Benard
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Introduction

A year ago I wrote an article for the Illinois Prevention Resource Center's Prevention Forum newsletter which addressed the critical need for the prevention and education fields to change the framework from which they often view youth, to see children and youth not as problems which need to be fixed but as resources who can contribute to their families, schools, and communities (Benard, January, 1990). In that article I discussed a powerful strategy for providing youth the opportunity to be useful contributing members of their communities--youth service. I still believe youth service programs at the middle, junior, and high school level can play a major role in reducing the alienation many youth feel from their families, schools, and communities, a disconnectedness that often manifests in the social problems of alcohol/drug abuse, teen pregnancy, and dropping out of school. **However, what has become increasingly clear to me this last year is the need for children to experience themselves as resources from early childhood on. This means "youth service" must be a concept we infuse throughout our schools from the preschool level forward; "youth service" should not be another program or course tacked on to an already over-full curriculum.** The chances that a semester of youth service will instill in an already alienated adolescent a sense of personal worth and value--after experiencing years of treatment as a "problem"--are slim.

What I am advocating in stating that the concept of youth service must be infused throughout our schools is none other than the adoption of a peer resource model of education in which schools and classrooms are restructured so that youth--from early childhood through late adolescence--are provided ongoing, continuous opportunities to be resources to each other. While I have referred to peer programs in the past (Benard, January, 1988) as the "lodestone to prevention," based on their effectiveness in reducing the rate of substance use in adolescence, the rationale for a peer resource model of education is so multifaceted and grounded in research from so many disciplines and the research evidence for the effectiveness of peer resource programs on a youth's academic and social development is so compelling, I felt that a summary of these various bodies of research supporting peer resource strategies would contribute to the prevention field's mission of working to create supportive environments that empower individuals to make healthy, positive decisions and to achieve their human potential.

By way of definition, the term "peer resource" is used to refer to any program that uses children and youth to work with and/or help other children and youth.

Included in this definition are programs such as youth service, cooperative learning, peer tutoring, cross-age tutoring, peer helping (replaces the term "peer counseling"), peer mediation, peer leadership, and youth involvement. While this article will focus on the rationale for school-age peer resource programming, developing peer programming throughout the life cycle--self-help groups, mutual aid groups, for neighbor "natural helpers," intergenerational programs, etc.--should be a major focus of prevention policy and programming.

The Rationales for Peer Resource Programming

I. Importance of peer relationships in social development

According to several child development researchers, in the United States social science research has focused almost exclusively on adult-child interaction--especially the parent-child relationship- -as the critical vehicle for the socialization of children and youth (Berndt and Ladd, 1989; Johnson and Johnson, 1983; Damon and Phelps, 1989; Rubin, 1990). According to Johnson and Johnson, "Child-child relationships have been assumed to be, at best, relatively unimportant, and, at worst, unhealthy influences" (1983, p. 125). Not only has this negative bias toward peer influence been reflected in the ways our schools are structured to encourage an adult-child dyadic teaching situation and to discourage (and even punish!) student-to-student interaction, but certainly

in the substance abuse prevention field we have often viewed "peer pressure" as an evil to "Just say no" "to rather than acknowledging that peer influence can be a powerful positive force.

In the last several years a small but growing body of research studies "have shown that peer interaction is conducive, perhaps even essential, to a host of important early achievements" (Damon and Phelps, 1989, p. 135). In fact, according to Johnson and Johnson, "The primary relationships in which development and socialization may take place may be with peers" (1983, p.126).

The following are a number of the ways in which, according to research, peer relationships contribute to a child's social and cognitive development and socialization:

1. Peer interactions are another arena--besides family, school, and community-- which provides support, opportunities, and models for pro-social development. **Furthermore, in this arena, children directly learn attitudes, values, and skills through peer modeling and reinforcement.**
2. Peer interactions, compared to interactions with adults, tend to be more frequent, intense, and diverse and allow for experimentation, and thus are powerful arenas for shaping a youth's behavior.
3. According to the Segals--and a Piagetian position as well-- peers are especially critical in the development of internalized moral standards: "For an internalized moral sense to develop, the child needs opportunities to see the rules of society not only as dictates from figures of authority but also as products that emerge from group agreement" (1986, p. 16).
4. **Through reciprocal peer interactions children learn to share, to help, to comfort, and to empathize with others.** According to Piaget and other developmental psychologists, empathy (or perspective-taking) is one of the most critical competencies for cognitive and social development (Attili, 1990). In fact, "All psychological development may be described as a progressive **loss of egocentrism** and an increase in ability to take wider and more complex perspectives"--a process that occurs primarily in interaction with peers (Johnson and Johnson, 1983, p. 127).
5. Through peer interaction children learn critical social skills such as impulse control, communication, creative and critical thinking, and relationship or friendship skills. In fact, the failure to develop social and relationship skills is a powerful, well-proven early predictor of later substance abuse, delinquency, and mental health problems (Kellam et al, 1982). Conversely, a huge body of research supports social competence as a predictor of life success (Attili, 1990).
6. **Peer relationships have a strong influence on achievement** (Ladd, 1990; Taylor, 1989; Dishion, 1990). In fact, research into peer rejection (from early childhood on) found this strongly associated with unfavorable attitudes toward school, higher levels of school avoidance, and lower academic performance levels (Ladd, 1990). On the other hand, **peer acceptance and the ability to make new friends has been associated with liking school, higher school attendance rates, and higher academic performance level** (Ladd, 1990; Bukowski and Hoza, 1989).
7. Lastly, peer interactions are powerful influences on a child's development of identity and autonomy (Bukowski and Hoza, 1989). **"It is through peer relationships that a frame of reference for perceiving oneself is developed,"** and that the values and social sensitivity required for autonomy are fostered (Johnson and Johnson, 1983; deRosenroll, 1989).

II. Importance of social support to positive outcomes

Besides the critical importance that child development research has identified that peer interactions play in social and cognitive development, in the fields of community psychology, social anthropology, and sociology we have a huge body of research documenting **the powerful effect social support has on physical, cognitive, and social outcomes**. Beginning with Cassel's working 1974 claiming that, "People can become physically, mentally, or socially debilitated if they do not receive or perceive signs from significant others that make them feel safe and valued," hundred of studies have examined the nature of this concept (Wasserman, 1988, p. 7). Furthermore, Cassel and others since contend **that the nature and strengths of available group supports--especially the mutuality and reciprocity involved--can be protective of health and mental health as well as serving as a "buffer" for those experiencing stressful life events or situations**--low birth weight, death, divorce, illness, unemployment, family alcoholism, depression, school transition, etc. (Dubow and Tisak, 1989; Felner et al ,1982; Fenzel and Blyth, 1986.; Sandler,1980; Sandler et al, 1985) Certainly the protective factor

research of Emmy Werner and others has clearly identified social support as critical in positive outcomes for youth (1982).

While most of the social support research, per se, has focused on adult social networks or adult and family support to children (Dubow and Tisek, 1989; Reid et al, 1989), research on child and adolescent friendships, along with the related literature on youthful loneliness, alienation, and suicide, has **clearly implicated the importance and protection friendships and peer social networks play in the positive development of youth** (deRosenroll, 1989; Fantuzzo, 1990; Sagan, 1987; Ellison, 1990).

For reasons we won't speculate on here, the dominant culture in our society has not valued friendship the way our various ethnic groups have. For example, in the Spanish language there is a word that captures the full meaning of social support and friendship-- "confianza." The African culture values "oneness of being, interdependence, interconnectedness, vitalism, complementarily" (Nobles, 1984, p. 250). Similarly, the Native American value system emphasizes cooperation and communalism over individualism and competition. According to Nobles, if our culture were to adopt a value system based on cooperation and mutual support, we could "mitigate the societal alienation which may be at the base of many social and psychological problems"-- including alcohol and drug abuse (1984, p. 250).

III. The failure of adult society to provide social capital for youth

A rationale emanating from the importance of peer social support in development is that for a growing number of youth in our society, support from peers may be the only social support they get! Increasingly, as James Coleman and others have documented, changes in family and community life since World War II have resulted in a loss of "social capital" for children--"the norms, the social networks, and the relationships between adults and children that are of value for the child's growing up" (1987, p. 36). While it's vitally important that we work on social policy changes to help build linkages between children and youth and adults (child care, family leave, family support, health care, etc.), it's also increasingly clear federal and state policy changes ensuring that families and children have access to housing, education, employment, health care, and childcare opportunities will not be soon in coming.

Given the lack of attention to and caring for youth on the part of adult society-- an inattention that "poses a greater threat to our safety, harmony, and productivity than any external enemy," according to Marian Wright Edelman of the Children's Defense Fund (quoted in Time magazine October 8, 1990)--**it appears imperative that we provide youth every opportunity we can to be a support and resource to each other. Children at all socioeconomic levels of our society can and do experience the alienation and disconnectedness that result when the natural linkages between them and their families, schools, and communities become frayed or broken. Peer resource programs offer the opportunity to build the positive social support all youth need.**

IV. Gives every youth the opportunity to help

Peer resource programs, whether they be cooperative learning groups or one-on-one peer tutoring, are most effective when each person involved experiences both the helper and the helpee role (Riessman, 1990). In FACT, MOST STUDIES FIND THE TUTOR RECEIVES THE MOST GAINS! Diane Hedin's review of students as teachers summarized the literature as "replete with anecdotes of alienated, troublesome youth conducting themselves in a serious and dignified manner while teaching younger students." She describes this phenomenon as follows: "**The experience of being needed, valued, and respected by another person produced anew view of self as a worthwhile human being**" (1987, p. 43). Moreover, the research of Roger Mills and his colleagues lends support to the hypothesis that the key to positive change for "at-risk" youth is changing how they perceive themselves (1988).Programs that label youth "at-risk," etc. only further stigmatize and discourage positive outcomes.

According to Frank Riessman, a major proponent of the "Helper Therapy Principle" for over 25 years, **helping is beneficial for the following reasons:**

1. The helper feels good because he or she has something to give
2. It is an active role in which the helper feels less dependent
3. The helper obtains a feeling of social usefulness (sometimes accompanied by increased status)
4. It is potentially empowering as it gives the helper a sense of control, a feeling of being capable of doing something
5. It encourages the helper to be open to learning so that he or she can help effectively (1990, p. 222)

The critical importance of all youth (and all people!) having the opportunity to participate in meaningful roles has been documented again and again in research (see Benard, January 1990 for a discussion of this point) and is considered by some researchers as perhaps the most important protective factor in preventing social problems like substance abuse, teen pregnancy, and delinquency (Rutter, 1979). Certainly the enormous growth of adult self- help/mutual aid groups testifies to the principle that participation is the dynamic at work in empowerment, and, I would claim, is the critical dynamic of prevention (Price, 1990). Similarly, research from the interdisciplinary field of community development has demonstrated unequivocally the importance of local participation, and hence ownership, in successful projects (Florin and Wandersman, 1990).

Other positive outcomes of every youth being given the opportunity to help include the exponential increase in the available help- giving resources in a school or community--and in an incredibly cost-effective way!--and the emergence of a cultural norm and ethos of helping and caring. We all know the negative power of cultural norms promoting alcohol use; imagine the positive power of a school community, let alone society, that promoted and systemically infused the value of caring for others!

V. Satisfies basic human psychological needs

According to William Glasser, **peer resource programs work because they satisfy our four basic human psychological needs to belong and love, to gain power, to be free, and to have fun** (1986). Our discussion of social support and of participation really addresses the needs of belonging and having power. **The need to be free, that is to be allowed and encouraged to make decisions and solve problems and to have some control over one's life, is essential to the development of identity and autonomy. Not only do peer programs meet these first three needs, process evaluations consistently find that youth enjoy their involvement in peer programs and find they are fun!** (Kohler and Strain, 1990; Greenwood, 1989).

VI. Opportunity to develop collaboration/conflict resolution skills

I've written extensively about the necessity for collaborative community wide prevention efforts if we are to create supportive, nurturing environments that will, in turn, discourage alcohol and drug abuse and other interrelated social problems (see Benard, October 1989). Considering **how difficult collaboration is for adults-- how entrenched and turf-conscious we can become after a lifetime of relating in a competitive, individualistic mode!--it seems imperative we encourage and provide youth the opportunities to relate to each other and work together in a cooperative and/or collaborative way from early childhood on.** No better preventionist training exists than peer collaboration and cooperative learning programs that engage youth in mutual problem solving, decision making, and conflict resolution in a climate of mutual helping and respect. According to Morton Deutsch, the seminal researcher into conflict resolution and the mentor of David Johnson, "In recent years, it has been increasingly recognized that our schools have to change in basic ways if we are to educate children [beyond hate] so that they are for rather than against one another, so that they develop the ability to resolve their conflicts constructively rather than destructively, so that they are prepared to live in a peaceful world" (1989, p. 1).

VII. Promotes acceptance and respect for diversity

Evaluations of peer-tutoring, cooperative-learning, and peer-initiation (peers initiate social interaction with a withdrawn child) programs consistently identify significant increases in social interaction, acceptance, and liking between heterogeneous peers, especially between physically and/or mentally handicapped or socially withdrawn and non-handicapped peers (Johnson and Johnson, 1986; Strain, 1985; Mesch et al 1986; Sainato et al, 1986; Maheady et al, 1988) and between white and non-white peers (Rooney-Rebeck and Jason, 1986; Slavin and Oickle, 1981).

These peer approaches clearly provide the solution--which our competitively and individualistically structured classrooms have failed to do--to two major educational issues: mainstreaming handicapped children and developing multiculturally sensitive classrooms. Moreover, cooperative learning and peer resource programs provide an equitable and socially just method of handling any other kinds of diversity within a classroom, especially for addressing the various learning styles and different types of intelligence's each child possesses without subjecting children to the deleterious effects of tracking, the conventional approach to this issue. According to Oakes and Goodlad, "Perhaps nowhere else in schooling are the negative, prejudicial consequences for access to knowledge so clear and so severe" as in the practice of tracking (1988, p. 18).

Promotes academic achievement

From an educational reform perspective, perhaps the most compelling reason for peer programs can be based on the hundreds of evaluations of cooperative learning programs as well as on the peer tutoring and cross-age peer tutoring approaches that have found both positive academic and social development gains in youth

(Johnson and Johnson, 1983; Johnson et al 1981; Glasser, 1986; Slavin, 1986; Graves, 1990; Fantuzzo et al, 1989; Greenwood et al 1989). Further more, according to a Stanford University study, peer tutoring is consistently more costeffective than computer-assisted instruction, reduction of class size, or increased instructional time for raising both reading and mathematics achievement of both tutors and tutees (Levin, 1984). According to Damon and Phelps' review, in cooperative learning groups academic gains have been especially significant in the areas of math, reading, and science--the three crucial areas of learning that have failed to engage an increasingly large number of youth (1988, p. 152). The Johnsons summarize the findings on achievement gains as follows: "Currently, there is no type of task on which cooperative efforts are less effective than are competitive or individualistic efforts, and on most tasks (and especially the more important learning tasks such as concept attainment, verbal problem-solving, categorization, spatial problem-solving, retention and memory, motor, guessingjudging-predicting), cooperative efforts are more effective in promoting achievement" (1983, p. 146).

According to Damon and Phelps, peer learning approaches that focus on peer collaboration (an intense cooperative approach) to solve a problem are especially effective in fostering creativity, experimentation, problem-solving skills and the learning of deep concepts, a "discovery learning" approach especially effective in science education. These are the critical thinking skills that report after report and commission upon commission warn us are not being learned in schools and yet are a necessity for meeting our future workforce needs. Findings from their twoyear study showed, "Gains were made with virtually no instruction from adults other than the initial instructions to work together toward correct solutions.

Feedback on right and wrong answers was given only by a programmed computer.

The children managed their own interactions, invented their own problem-solving procedures, and discovered their own solutions" (1989, p. 151). Furthermore, they concluded, "Our emerging picture shows peer collaboration creating an atmosphere of social stimulation and support" (p. 153)--the two environmental attributes essential for healthy development to occur (see discussion in Benard, January 1989, p. 9).

Although the academic gains made by students in cooperative classrooms certainly provide rationale enough for adopting this approach, for preventionists and others concerned with the overall health and well-being of children and youth and the prevention of the interrelated social problems like alcohol and drug abuse, teen

pregnancy, and delinquency, as well as school failure, **the nonacademic benefits found in evaluations of cooperative learning approaches are even more significant— more positive student attitudes towards school, towards their classmates, and toward themselves** (Graves, March 1990; Wright and Cowen, 1985; Johnson and Johnson, 1983).

We've already discussed the benefits of the improved interpersonal relations and the greater social support which are consistently found in cooperative peer approaches. Another issue critical to a child's development we discussed earlier was that of altruism and perspective-taking; again, evaluations of cooperative learning approaches have found consistently positive outcomes on these attributes (Slavin, 1990). In our discussion of the value of participation for youth and empowerment, we indirectly were addressing the issue of self-esteem. And, according to Slavin, "Perhaps the most important psychological outcome of cooperative learning methods is their effect on student self-esteem" (1990, p. 43). Given that "two of the most important components of students' self-esteem are the feeling that they are well-liked by their peers and the feeling that they are doing well academically," this is hardly surprising! (Slavin, 1990, p. 44). Moreover, given the interrelationship between school failure and antisocial behavior, clearly, academic success and positive social development have a symbiotic relationship, and efforts to prevent the interrelated social problems of alcohol and drug abuse, school failure, delinquency, and teen pregnancy must address both academic success and pro-social development (Kellam, et al, 1982). In summing up the positive nonacademic, social outcomes of cooperative learning strategies, Slavin states that given the variety of cooperative and peer learning strategies, "What is remarkable is that each of several quite different methods has been shown to have positive effects on a wide variety of outcomes" (1990, p. 53). Furthermore, "In general, for any desired outcome of schooling, administer a cooperative learning treatment, about two-thirds of the time there will be a significant difference between the experimental and control groups in favor of the experimental group--rarely, if ever, will differences favor a control group (1990, p. 53).

IX. Reduces alcohol and drug use among youth

Saving the most obvious rationale for last, two recent independent meta-analyses (Tobler, 1986; Bangert-Drowns, 1988), evaluating hundreds of prevention programs and strategies each, found that "peer programs are dramatically more effective than all the other programs," even at the lowest levels of intensity (hours spent in prevention programming) (Tobler, 1986, p. 555).According to Bangert-Drowns, when intensity was higher, the peer program effects were even more pronounced (1988). Since I discussed Tobler's meta-analysis at length in an earlier article (Benard, January 1988), suffice it to say here that wouldn't it be wonderful if "a word to the wise were sufficient!"

Clearly, based on the above rationales that included the importance of peers in social development; the need for youth in our society to have more available social support and more opportunities to participate and help; the need for every individual to be socialized to accept and respect diversity; the value of learning collaboration and conflict resolution skills from an early age; and the proven positive academic and social outcomes of evaluated cooperative and peer learning and resource programs, peer programs do, indeed, offer us a "lodestone" to developing health and well-being in our children and youth, and hence, in our society. However, before we discuss the reasons that, instead of their being the major educational and social intervention in our classrooms, schools, and communities, **cooperative and peer programs constitute only 7-20 percent of classroom time(Johnson and Johnson, 1985) and, according to Riessman, no comprehensive, large-scale, school wide peer learning models exist**, let's briefly summarize a few components that are considered essential in creating effective peer programs.

Critical Ingredients of Peer Programs

It is definitely beyond the scope of this article to discuss the issue of implementing peer learning approaches, and I refer anyone to the many books and articles concerned with the how- to's of starting and maintaining peer programs (including the Far West Laboratory's summary and policy brief) and to the organizations listed in the

appendix. However, some ingredients appear essential to creating effective peer programs; these are summarized as follows:

1. Positive interdependence

According to the Johnsons, students must perceive that it is to their advantage if other students learn well and vice versa. This can be done through mutual goals, division of labor on a task, dividing resources among group members, and joint rewards.

2. Face-to-face interaction

Students must interrelate with each other to achieve a common goal.

3. Individual accountability

Each youth must be held personally responsible for mastering the material and for providing help and support to each other.

4. Training in social skills

All youth must be trained in the social skills necessary to build and maintain collaborative relationships communication/assertiveness, conflict resolution, problem-solving, and, several researchers add, friendship or relationship skills such as cooperating, sharing, helping, displaying loyalty, initiating activities, and developing intimacy (Inderbitzen- Pisaruk and Foster, 1990; Hays, 1984).

5. Time for group processing

Students must be given the time to reflect and the procedures for processing how well their groups (or dyads) are functioning.

6. Heterogeneous composition

Groups should be diverse with respect to academic ability, ethnic background, or physical disability.

7. Each child a helper

Each child must be given the opportunity to be the helper in a peer tutoring situation (except, obviously, in a cross-age situation) or the group leader in a cooperative learning experience.

8. Adequate duration

While researchers aren't in agreement on this issue, the length of time the children remain in the same group depends on the purpose and context of your group or dyad. Certainly, if one of your goals is the establishment of personal relationships as in cross- age tutoring, students must be grouped or paired together over a sustained period of time [the very successful Tribes model groups children for the whole year (Gibbs, 1987)].

9. Youth involvement in program implementation

Years of experience from the community development field have shown us that for any program to be successful, the participants must be involved in the planning and implementation. The importance of participation must again be underscored! According to Jason and Rhodes, "By providing the youngsters with responsible roles in programs that foster autonomy and choice, the children are less likely to reject the messages and intervention processes and more likely to gain a sense of self-acceptance, self-worth, and confidence" (1989, p. 209).

Needed: A Paradigm Change

The list of essentials for creating a peer resource program (see Critical Ingredients of Peer Programs) seems fairly simple and unimposing; why, then, does this model, which has been proven so effective in building academic and social success in youth for years and which has been advocated by educational reformers and preventionists for even more years, remain the exception instead of the mode in classrooms and schools throughout the United States? The answer to this question could be made complex, but even researchers agree, for the most part, that it is quite simple: Adopting a peer resource model of education involves paradigmatic change. Whether this change is described as moving from a perspective that youth are problems to one that youth are resources or from a traditional "professional" model to a "consumer/prosumer" model (Riessman, 1990), mental health and education researchers that

advocate this approach are describing a process whereby a "consumer" of help (i.e., a patient or a student) becomes a "producer" of help (i.e., a counselor or a teacher).

Basically this paradigm change involves a process of demystifying professional expertise and empowering people to help themselves and each other (Gottlieb, 1985; Rappaport et al, 1985; Israel and Antonucci, 1987; Borkman, 1990).

Needless to say, this change runs counter to the socialization most professional helpers such as counselors or teachers experience throughout their years of professional training. According to Riessman, the traditional professional model emphasizes licensing, credentialing, and often mystifies its proffered knowledge. It has a vested interest in maintaining some distance and inequality with the consumer (1990, p. 227). For example, "Teachers have been trained to lecture, demonstrate, and test. They have not been trained to facilitate learning by developing cooperative learning groups, peer tutoring, and the like, which requires the teacher to play a new role: manager, orchestrator, trainer, supervisor, coach. A similar facilitator role is required for the counselor involved with peer helpers" (Riessman, 1990, p. 227).

According to William Glasser and others, successfully implementing peer resource programs like cooperative learning within a school necessitates this change in roles for teachers; no longer should teachers view themselves as the "bosses" who must control the students but rather as "managers" who facilitate the students' learning through skills such as organizing and structuring the learning environment (i.e., groups) and monitoring and supervising the process (1986 and 1990). These are not skills that are currently taught in teacher training institutions, nor are they the skills teachers witnessed in their own education, nor are they the skills their school administrators usually reinforce and encourage.

What is certainly clear is the existence of one of those "vicious cycles" that need to be addressed not symptomatically but systemically. **Riessman, Glasser, Schaps, the Johnsons, Deutsch, and Slavin--all leaders in the cooperative/peer learning movement- -conclude that the key to creating effective peer resource programming is the development of cooperative structures and relationships at all levels within a school or district.** Teachers cannot be expected to encourage participation, collaboration, and decision-making among their students when they themselves are not encouraged to participate and collaborate with each other as well as have some control over the decisions affecting their work environment. In his recent book, *The Quality School* (1990), Glasser builds the case that educational reform depends on replacing the traditional bureaucratic "boss-management" educational system with a lead-management system in which administrators and teachers work collaboratively school wide. Furthermore, the Johnsons' research on teachers who work cooperatively found the same positive benefits that were found on students: higher self-esteem, more social support, more positive interpersonal relationships, and more positive attitudes toward school (1987). In essence, what can happen when a peer cooperation/collaboration model is implemented school wide--among all school personnel--is the creation of a school wide ethos of cooperation, caring, mutual respect, and participation!

While change does not come easy, and we all have all kinds of reasons why this and that cannot be done, I am reminded of the words of Bill Carmack, a longtime community developer and Professor of Communications at the University of Oklahoma, that 85 percent of all successful change is due to the attitude of the change agent. When we talk of paradigm change, we are basically talking about changing our attitudes; and all we need to do this is the will and a sense of vision of a better world.

Appendix

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