

An Evaluation of Dancing Classrooms North Texas Expansion Pilot Program

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Abstract

Information regarding the impact of social dance programs in public school physical education is rare. Therefore, the purpose of this study was to evaluate a pilot program newly franchised from Pierre Dulaine's rapidly growing "Dancing Classrooms" program out of New York City (refer to the documentary "Mad-Hot Ballroom Dance"). Based on the goals set forth from a steering committee eager to bring the 10-week curriculum to an urban southwest city, 5th grade students (N = 624) participating in a quasi-experimental study completed a self-report questionnaire measuring their senses of personal mastery, social relatedness, and school environment. Findings of the study reveal significant improvement regarding students' perceptions of social support, diversity interaction, self-efficacy, and school success as a result of the program.

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Ballroom dancing has again gained recognition in American popular culture as evidenced by recent productions like *Dancing with the Stars*, *So You Think You Can Dance*, *Dance with Me*, and *Shall We Dance*. This phenomenon displays the physical and aesthetic qualities of dancing; while subtly alluding to potential character building traits of working with a partner. As a result, this has led to an emerging list of questions regarding the nature of partner/social dance and its relationship to youth development and education reform.

Throughout history, dance has been a physical expression of social values (Jonas, 1995, Malnig, 1992), a tool for community bonding (Croyle, 2007), socializing and preserving culture (Hanna, 1999), a complex system invoking higher order thinking (Hannaford, 1995), and an art form with transformative self and social outcomes (Press, 2001). As Martha Graham, a well-known dancer of the early Twentieth century, stated; "Dance is the hidden language of the soul" (Center for Educator Development in Fine Arts, 2004). Dance, particularly partner dancing, has the ability to transcend political or ethnic boundaries and uniquely impart the impetus for social or recreational bonding (Jonas, 1998). In today's world, these values might prove to be important and valuable. "When we understand how to move in harmony with our entire body, in contrast to only our mind, we might have a deeper understanding how to create harmony in our communities and the world" (Dill, W. 2007).

With such a rich history throughout the world, dance has much to offer to the academic setting (Rockwell, 2002). In addition to sport activities, dance can serve as both a fitness and artistic venue for promoting lifelong activity in a manner that may be

viewed as less competitive, more inclusive and multi-generational (Healthy People 2010, 2004). The National Dance Association (1977) supports the reciprocal link between dance and health indicating that “dance can serve as a noncompetitive means of developing the child physically, emotionally and aesthetically, and can be a demanding exercise that encourages people to be physically active and fit” (p. 2). As a result, dance has powerful potential to benefit the fields of health and education, as a form of recreation, artistic expression and wellness (American Obesity Association, 2004; Centers for Disease Control and Prevention, 2004). Social dancing may also serve as an instructional tool to provide a safe environment to introduce and reinforce such social skills as respect, trust, courteousness, and acceptance (Fowler, 1977). Such programs are being developed and implemented throughout the United States; with one in particular that addresses the social development aspects.

A Brief History of Dancing Classrooms

In 1994, Ballroom Dance Champion Pierre Dulaine started a revolutionary program in the New York City Public Schools called Dancing Classrooms. Today, the program occupies over 200 schools and over 20,000 students in New York alone, and is spreading into cities and schools across the nation. The mission of the program is to address fundamental issues of 1) develop mutual respect, 2) build social awareness and teamwork, 3) foster self-confidence and self-esteem, and 4) promote diversity; all of which are transferable skills for productive adult life. These objectives are accomplished by working with a partner in dance frame through the practice of social dance. The students learn six Latin and ballroom dances and six traditional and line dances. The

students also receive a brief cultural background for each of the dances and are taught using developmentally appropriate methods of repetition and reinforcement.

Purpose of this Study

Thus far, the program touts much anecdotal evidence of program success, but lacks empirically based evidence to support such claims. Thus, the purpose of this study was to apply a quasi-experimental research method that accurately depicts any significant value of the program over the course of a new franchise pilot.

The Pilot Program

The program itself incorporated a uniform curriculum-based system in which all teaching guest artists (N=24) were trained directly and precisely by Pierre Dulaine. The Teaching Artists then were assigned to the various participating schools, using a ratio of one Teaching Artist to one 5th Grade class (average 24-30). The classes were taught during the enrichment/specials time and were located in the gyms and cafeterias. Each Teaching Artist was accompanied at all times by a designated school staff, a physical education teacher, or other paraprofessional in order to satisfy state requirements as well as assist with discipline and management.

The students received twenty sessions at approximately 45 minutes each, two lesson per week for 10 weeks and learned confidence, social awareness, teamwork, and diversity through the experience of learning Merengue, Rumba, Foxtrot, Waltz, Tango, and Swing dances throughout the fall 2006 semester. The last session was a special culminating event held at each school's campus in which the 5th grade students performed their dances for peers, school personnel and parents. The experience was further highlighted with a "Colors of the Rainbow" team match between schools held at the

University of Texas at Arlington, for which Pierre Dulaine himself was the inaugural emcee.

Methods

Participants

The 5th grade participants in the study (N = 624) hailed from nine elementary schools in two neighboring independent school districts located in a southwest metropolitan area. There were a total of six experimental schools (N = 423) and three control schools (N = 201). In the experimental schools, the entire fifth grade participated in the dancing classrooms program during their physical education enrichment time. The ethnicity breakdown of participants was 53% Hispanic, 22% Caucasian, 12% African American, 9% Asian, and 4% Native American.

Instrumentation

A quasi-experimental research method was applied to the Dancing Classrooms pilot program consisting of a pre and post self-report instrument for both the control and experimental schools. Based on Search Institute's 40 Developmental Assets (1996) and Prince-Embury's (2006) Resiliency Scales for Adolescents, the questionnaire was developed by the dancing classrooms steering committee (i.e., ISD superintendents, public relations directors, physical education coordinators, grant coordinators, and university researchers) who identified and measured a variety of personal and social strengths critical for success in school. The instrument was written at a third grade reading comprehension level and designed to yield data that links school factors with each child's internal experience (i.e., behavioral changes and perceptions relative to self-esteem, motivation, diversity, social development, wellness, and learning environment).

The instrument was divided into two global scales (Sense of Mastery and Sense of Relatedness), each with a set of subscales. Although many of the scales shared a common underlying variance, it was hypothesized that each construct would exhibit its own unique variance. Each self-report item allowed five response choices ranging from 0 (Never) to 4 (Almost always).

The Sense of Mastery global scale was designed to measure values like intrinsic motivation, curiosity, disposition to a task, and problem solving ability. It included three subscales: 1) Optimism and Confidence defined as a positive attitude about the world, a high self-esteem, and a perception of control in one's life (Seligman et al., 1995), 2) Self-Efficacy and Motivation defined as one's approach to overcoming obstacles, making good decisions, and finding strategies and solutions to problems (Pajaras, 2002), and 3) Health and Wellness defined as one's perceptions of personal health, feeling good about themselves, getting the exercise that they need, and demonstrating a strong health-related locus of control (Guinn et. al., 2006; Graffeo and Silvestri, 2005). Children with a high sense of mastery are able to interact with and enjoy a cause and affect relationship with their environment in healthy ways.

The Sense of Relatedness global scale measured the capacity to which an individual can function as a social organism and feel connected to others (Connell and Wellborn, 1991). The subscale areas included: 1) Trust defined as perceiving others to be accepting, reliable, and authentic in social relations (Erikson, 1963), 2) Access to Support defined as a belief there are others whom the child can turn to for assistance (Werner & Smith, 2001), 3) Social Comfort defined as a feeling of belonging that buffers other stressors, and 4) Tolerance of Difference defined as a capacity to safely express one's

differences while respecting the rights and feelings of others. Children with a high sense of relatedness are able to assess their social needs, ask for assistance when necessary, and work cooperatively to solve problems.

As a theoretical construct, resiliency has been an important and powerful force to the outcomes of youth development and success in schools (Luthar 2003; Hellison, 2005). An operational definition of resiliency is the “hardiness, optimism, competence, self-esteem, social skill, achievement, or absence of pathology in the face of adversity” (Prince-Embury, 2006, p.1). According to resiliency theory, there are a number of personal qualities that allow a child to cope with various types of school-based adversity including intellectual ability (Luther & Ziglar, 1991), temperament (Rothbart & Bates, 1998; Wright & Masten, 1997), self-regulation and autonomy (Jacelon, 1997; Cicchetti & Tucker, 1994; Thompson, 1990), self-reliance (Polk, 1997), sociability (Brooks, 1994), impulsivity and control (Eisenberg et al., 2004), and communication with peers and family (Wyman et al., 1992). Studying resiliency has helped psychologists and educators understand why some children overcome seemingly overwhelming obstacles while others grow to become complacent to their environment. The consensus of the literature is that the adeptness of resiliency is not only beneficial for those who possess these skills innately, but also, it can be taught to children successfully. Indeed, the construction of resiliency theory in recent years has driven the study beyond an academic examination to the doorstep of applied science.

Results

Reliability and Validity of the Instrument

The reliability of the scales is discussed in terms of internal consistency, assessed by Cronbach's alpha coefficients (Cronbach, 1951). All of the global scales and their associated subscales evidenced high levels of internal consistency (Table 1) ranging from .80 to .92 (where values of .70 or higher are considered acceptable). Pearson correlation matrices of the global scales and subscales are reported in Table 2. These analyses were conducted to explore the relationship of the scale and subscale scores with each other, and assure that each subscale correlated highest with its associated global scale. For example, the correlation between the Sense of Mastery and Sense of Relatedness global scale was .80, indicating an overlap of 64% of the variance for the total sample. This correlation supports the hypothesis that Sense of Mastery and Sense of Relatedness are related resiliency strengths. Indeed, each subscale correlated highest to its associated global scale.

Evidence of validity based on internal structure of the instrument was explored further using multiple factor analyses of item level responses by the standardization sample. The purpose of conducting these analyses was to assure the nature of the inter-relationship of the instrument constructs within the standardization sample. An item level analysis of responses to 43 items by 624 adolescents utilized a principal component analysis extraction method with varimax (with Kaiser Normalization) rotations. Rotations converged in seven iterations. The first rotated extraction yielded twelve factors with eigenvalues of 4.0 or above. The first factor accounted for 45% of the variance. Table 3 indicates factor loadings for each component.

Global Scale and Subscale Findings

Univariate analysis of variance for each scale and subscale were computed to search for any significant difference within the pre and post mean scores reported between the control schools and experimental schools (Table 4). Findings yielded statistically significant program impact in the area of Social Support ($p < .001$) and none other. The statistical significance of the observed difference for the Social Support subscale was very strong ($F = 12.100$). The observed power of this significance was also very strong with a calculated value of .935.

A univariate analysis of variance was also conducted between the genders for each of the global scales and related subscales (Table 5). Girls reported significantly higher means across the Sense of Relatedness global scale (pre-test = $p < .000$; post-test = $p < .000$), as well as most subscales (Optimism [pre-test = $p < .000$; post-test = $p < .003$], Self-Efficacy [pre-test = $p < .023$; post-test = $p < .034$], Trust [pre-test = $p < .001$; post-test = $p < .001$], Social Support [pre-test = $p < .000$; post-test = $p < .000$], Comfort and Connectedness [pre-test = $p < .000$; post-test = $p < .009$], Diversity [pre-test = $p < .000$; post-test = $p < .000$], and School Environment [pre-test = $p < .000$; post-test = $p < .000$]). The only subscale that showed no gender difference was found in Health and Wellness where values of (pre-test = $p < .312$; post-test = $p < .992$) were observed. The Sense of Mastery global scale showed girls reporting significantly higher values on the pre-test ($p < .008$) only. The post-test for Mastery ($p < .097$) showed no significant difference at $p < .05$.

Individual Item Analysis

Three cross tabulation tests (Pearson Chi-Square, Likelihood Ratio, and Linear-by-Linear Association) were calculated for each item-inventory (Table 6). Of the fifty total questions, ten showed a meaningful difference ($p < .05$) with the experimental group

trials compared with the control group trials. The first question, “I will be successful when I grow up” reported three significant test results ranging from $p=.010$ to $p=.028$. The question “If I try hard it makes a difference” showed two significant test results (i.e., $p=.011$ for Chi Square, and $p=.014$ for Likelihood Ratio). “I am getting the exercise that I need” showed significant test values of $p=.029$ (Chi Square) and $p=.042$ (Likelihood Ratio). “Other people treat me well” showed significant test values of $p=.023$ (Chi Square) and $p=.028$ (Likelihood Ratio). “People accept me for who I am” showed one significant test $p=.047$ (Chi Square). “There are people who will help me if I need it” demonstrated significant test values for each of the three tests ($p=.012$ Chi Square, $p=.017$ Likelihood Ratio, and $p=.010$ Linear-by-Linear Association). “I feel supported” showed significant test values of $p=.044$ (Chi Square) and $p=.035$ (Linear-by-Linear Association). “I respect people who are different than me” showed significant test values of $p=.034$ (Chi Square) and $p=.035$ (Likelihood Ratio). “I get a lot of encouragement at my school” showed significant test values of $p=.014$ (Chi Square) and $p=.014$ (Likelihood Ratio). Lastly, the question “School will help me become successful” demonstrated significant test values for each of the three tests ($p=.018$ Chi Square, $p=.023$ Likelihood Ratio, and $p=.005$ Linear-by-Linear Association).

Discussion

Once the findings of this study were shared with the Dancing Classrooms North Texas steering committee members, there was much reflection and discussion as to how these findings related to this inaugural teaching and learning experience. Even though some of the research findings did not come back as showing an impact on student growth and development, the group unanimously agreed that these findings indicate specific

windows of opportunity for learning, development, and instructional improvement. Also, being that it was the first time this program was offered in these school districts, as well as the first time teaching artists instructed 5th graders in the public schools, it was determined that the teaching artists had a relatively large “self-concern” (Meek & Behets, 1999) for instructing the material correctly and maintaining the quality control explicitly detailed by Pierre Dulaine during the teaching artist training. To varying degrees, the teaching artists “instruct-ability” affected student growth as measured by the research, showing most potential for improvement within the Sense of Mastery components. This may also help explain why some of the significance across scales, subscales, and individual test items within the Mastery global scale were relatively weak showing little experimental significance. As the program continues to grow, however, it will be of great interest to continue measuring these components in order to identify any shifts in teaching artists’ focus from a “self-concern” to “learner-concern” pedagogy.

A specific research question in the study asked whether the Dancing Classrooms program positively affects the way kids’ perceive diversity. The assumption was that this program would help make progress toward breaking down barriers and challenges related to gender and cultural differences due to its unique ability to bring girls and boys together from multiple cultures and have them work together respectfully to achieve common goals. This did not seem to be the case in this study due to the low significance values found on those particular subscale items that reflected diversity and compassion for others. For example, the question “Kids can be my friends no matter what race they are or whether they are a girl or a boy” showed a value of $p=.56$. Likewise, the question “I get along with people who aren’t from the same culture as me” showed a value of $p=.29$.

Related to this are findings from questions within the Trusting Others subscale such as “I can trust other people” where a value of $p=.80$ was reported, and the question “I can let others see my real feelings” where a value of $p=.91$ was found.

There were two specific items within the School Environment Subscale that showed a strong significance in terms of program impact with the experimental group only, which raises some interesting questions and merits further discussion. The two questions “I get a lot of encouragement at my school” (Table 6, item #9) and “School will help me become successful” (Table 6, item #10) both showed a significance of $p=.02$. One explanation may be since all participating schools in the pilot knew they would be competing against each other at the end of the semester in the “Colors of the Rainbow” team match, the kids were most likely visited more frequently by school principals, teachers, students, and parents, giving the impression that what they were doing was important, significant, and highly valued. Another contributing factor might have to do with the program being a collaborative effort between the school, community, university, etc. Perhaps the participants were able to see a connection to what they were learning in school and how it relates and applies to the outside world.

The Sense of Mastery global scale and associated subscales did not exhibit much in terms of program impact although there is one piece of the data that is worth mentioning here. Girls reported significantly higher mean scores (pre and post) across every subscale measured with the exception of Health and Wellness where boys reported similar values (Table 5). When compared globally for “Mastery” (including Motivation, Self-Efficacy, and Health subscales combined), girls ($\underline{M}=49.46$) reported significantly higher scores than boys ($\underline{M}=47.22$) for the pre test only. For the post test, girls from the

control group dropped off significantly ($\underline{M}=47.99$). This may suggest that the girls in the control group (who are receiving traditional physical education and not Dancing Classrooms) may be changed or altered in their perceptions of “Mastery” during the experience. For example, girls “Optimism” mean scores in the control group drop dramatically throughout the semester (pre $\underline{M}=14.53$; post $\underline{M}=14.15$) and scores for the experimental group actually increase (pre $\underline{M}=14.31$; post $\underline{M}=14.58$). This leads to two emerging questions; first, does girls’ sense of “Optimism” erode as a result of what they are receiving in more traditional physical education programs? or more directly, the reciprocating question, are girls’ expectations of physical education better sustained when they receive the Dancing Classrooms program?

Finally, the most significant finding in the study reflects the strong relationship between the Dancing Classrooms program and social support and social development. The social support subscale showed highly significant results with 5th graders receiving the program compared to their counterparts who did not ($p=.001$). Specifically, sixty percent of the individual item-inventories within the social support subscale showed a significance at $p<.05$, and the remaining 40% of items showed a p-value of $p<.15$. The significant gains regarding access to support systems and/or generally feeling supported or authenticated in the Dancing Classrooms program make it an important contribution to youth development. Feeling as though 5th graders belong to something good not only helps prepare these youth for a future dependent upon successful human interaction, but also helps buffer other stressors they are experiencing day-to-day.

Research shows that students are most likely to be motivated when learning is real and personally relevant, solutions are within their capability, and results are immediately

discernable (Goodlad, Mantle-Bromley, and Goodlad, 2004). This research suggests a paradigm shift in priorities from a preoccupation with subject matter to increased concern for students as people (Siegel, 1999). To provide such learning, community resources must be invited into the classroom bringing new initiatives that focus on personal fulfillment, education for social interaction, and responsibility (Combs, 1994). The genius of good education lies in helping students and teachers fulfill their personal and social needs as well as guiding them to discover and pursue needs they never knew existed. Schools in particular serve as a formidable agent in helping these young people realize these goals, however, this can only be accomplished if administrators and teachers focus on building a climate in which intervention and development programs are valued, supported, and part of the total school environment.

Reflections from a Participating ISD Public Relations Director

Fifth grade students will now have more self-confidence and get along with peers from many backgrounds, thanks to Dancing Classrooms. The pilot program at the six elementary schools provided opportunities for the district to support the philosophy of the 40 Developmental Assets, and in 2007-2008, every fifth grade student is experiencing the Dancing Classrooms program. The Search Institute created the 40 Development Assets after years of researching what experiences and relationships help youth become well rounded, successful adults. The more assets a young person experiences, the better off they will be as adults, and the less likely they are to engage in risky behavior. The ISD believes in this philosophy, and implementing programs that support the Asset philosophy is part of the district's strategic goals, to ensure healthy and nurturing school environments. These assets, or "building blocks," are numbered one through 40, and are

divided into eight categories, such as support, empowerment, boundaries and expectations, and positive identity.

In the Support Category, Dancing Classrooms provides children with Other Adult Relationships (Asset 3) and a Caring School Climate (Asset 5). In the Empowerment Category, Dancing Classrooms helps students see that Community Values Youth and wants to see them succeed (Asset 7). In the Boundaries and Expectations Category, Dancing Classrooms helps students understand School Boundaries (Asset 12), because the program provides clear rules and consequences for not adhering to them. Dancing Classrooms also provides Adult Role Models (Asset 14) and High Expectations (Asset 16). Dancing Classrooms has increased students' self esteem (Asset 38) and given them a Positive View of Personal Future (Asset 40).

The 40 Developmental Assets is not a program, but a way of approaching children. In making these assets a part of its strategic goals, district board and staff examine potential programs to see what kind of assets they would provide to help provide a nurturing school climate. Dancing Classrooms has made shy students more confident, helped students with no focus become engaged in school, and provided opportunities for students to break down boundaries at an early age. As the district's student population becomes more racially, ethnically, and economically diverse, programs like Dancing Classrooms empower students to overcome prejudices and stereotypes. Dancing Classrooms brings all students together on an even playing field, or in this case, a dance floor, to demonstrate that everyone should be valued for whom they are.

Future Direction

One of the most interesting findings in the study can be found in the question “I am getting the exercise that I need”. This item-inventory showed a noticeable impact on the kids receiving the program compared to the ones who were receiving other kinds of physical education programming (Table 6, Item #3). Typically, those administrators and physical education teachers not familiar with dance don’t think of it as a “fitness” activity, although the findings in this study suggest that kids are experiencing dance as an easy and efficient way of getting the exercise they need. Therefore, a necessary next step in the research should explore the fitness levels of kids receiving the “Dancing Classrooms” program and measure how much “exercise” they are receiving throughout the 10-week program. Specifically, the use of heart-rate monitors would yield precise data regarding how long these kids are exercising in their target heart-rate for fitness zones.

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Table 1

Coefficient Reliability Alphas for each Global Scale and Associated Subscales

Scale/ Subscale	Alpha	Valid cases	Mean	Variance	N of items	Inter-item covariance
Sense of Mastery	.90	1245	68.91	193.25	24	.008
Optimism & Confidence	.83	1245	37.31	58.24	13	.004
Self-Efficacy & Motivatio	.86	1245	48.13	98.76	17	.009
Health & Wellness	.83	1247	31.65	53.76	11	.011
Sense of Relatedness	.92	1246	75.85	251.87	26	.009
Trusting Others	.84	1246	37.15	68.21	13	.008
Social Support	.87	1246	42.80	94.68	15	.010
Comfort & Connectednes	.90	1246	63.93	184.98	22	.009
Diversity & Compassion	.81	1247	26.75	36.94	9	.011
School Environment	.80	1247	20.57	25.95	7	.014

Table 2

Pearson Correlation Matrices between Global Scales and Subscales

Scale/ Subscale	1	2	3	4	5	6	7	8	9
Mastery									
Optimism	.89								
Self-Efficacy	.94	.72							
Health	.74	.55	.60						
Relatedness	.80	.72	.72	.54					
Trusting Others	.72	.65	.66	.57	.91				
Social Support	.68	.65	.58	.58	.88	.72			
Comfort	.58	.51	.54	.44	.78	.65	.73		
Diversity	.64	.68	.66	.59	.88	.73	.71	.67	
Environment	.59	.53	.62	.57	.84	.78	.75	.78	.81

Note. 1 = Mastery, 2 = Optimism, 3 = Self-Efficacy, 4 = Health, 5 = Relatedness,
6 = Trusting Others, 7 = Social Support, 8 = Comfort, 9 = Diversity, 10 =
Environment.

Table 3

Total Variance Explained by Rotated Factor Analysis Components

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1 - Diversity Related Questions (12 total)	3.149	44.984	44.984	3.149	44.984	44.984
2 - Social Support Related Questions (8 total)	.913	13.045	58.028			
3 – Health Related Questions (6 total)	.821	11.732	69.760			
4 – Motivation Related Questions (4 total)	.701	10.020	79.780			
5 – School Environment Related Questions (3 total)	.517	7.390	87.169			
6 – Trust Related Questions (3 total)	.466	6.660	93.829			
7 – Miscellaneous (7 total)	.432	6.171	100.00			

Table 4

Univariate Analysis of Variance for Scales & Subscales

<u>Scale/ Subscale (D.V.)</u>	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power (alpha=.05)
Mastery Global	Corrected Model	244.389	3	81.463	.829	.478	.002	.231
	Intercept	2525719.82	1	2525719.82	25706.022	.000	.954	1.000
	Pre-Post	10.772	1	10.772	.110	.741	.000	.063
	RcSchool	216.852	1	216.852	2.207	.138	.002	.318
	P-P*RcS	23.856	1	23.856	.243	.622	.000	.078
	Total	122177.619	1244					
Optimism	Corrected Model	31.480	3	10.493	1.036	.376	.002	.283
	Intercept	210791.467	1	210791.467	20813.227	.000	.944	1.000
	Pre-Post	3.863	1	3.863	.381	.537	.000	.095
	RcSchool	12.125	1	12.125	1.197	.274	.001	.194
	P-P*RcS	9.004	1	9.004	.889	.346	.001	.156
	Total	12620.292	1246					
Self- Efficacy	Corrected Model	12.271	3	4.090	.367	.777	.001	.123
	Intercept	212920.226	1	212920.226	19108.007	.000	.939	1.000
	Pre-Post	2.652	1	2.652	.238	.626	.000	.078
	RcSchool	7.321	1	7.321	.657	.418	.001	.128
	P-P*RcS	3.882	1	3.882	.348	.555	.000	.091
	Total	13840.715	1244					
Health	Corrected Model	84.939	3	28.313	1.070	.361	.003	.292
	Intercept	450250.864	1	450250.864	17022.266	.000	.932	1.000
	Pre-Post	15.947	1	15.947	.603	.438	.000	.121
	RcSchool	67.032	1	67.032	2.534	.112	.002	.356
	P-P*RcS	.084	1	.084	.003	.955	.000	.050
	Total	32963.160	1246					

Scale/ Subscale (D.V.)	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power (alpha=.05)
Relatedness Global	Corrected Model	738.951	3	246.317	.978	.402	.002	.268
	Intercept	6219846.18	1	6219846.18	24693.625	.000	.952	1.000
	Pre-Post	262.250	1	262.250	1.041	.308	.001	.175
	RcSchool	469.820	1	469.820	1.865	.172	.001	.276
	P-P*RcS	24.341	1	24.341	.097	.756	.000	.061
	Total	313574.707	1245					
Trust	Corrected Model	134.864	3	44.955	3.361	.018	.008	.763
	Intercept	255078.870	1	255078.870	19071.313	.000	.939	1.000
	Pre-Post	.178	1	.178	.013	.908	.000	.052
	RcSchool	131.870	1	131.870	9.859	.002	.008	.881
	P-P*RcS	2.918	1	2.918	.218	.641	.000	.075
	Total	16746.617	1245					
Support	Corrected Model	183.126	3	61.042	5.065	.002	.012	.920
	Intercept	183391.695	1	183391.695	15218.363	.000	.924	1.000
	Pre-Post	145.815	1	145.815	12.100	.001	.010	.935
	RcSchool	22.401	1	22.401	1.859	.173	.001	.275
	P-P*RcS	.621	1	.621	.052	.820	.000	.056
	Total	15162.127	1246					
Comfort	Corrected Model	13.452	3	4.484	.311	.818	.001	.111
	Intercept	213987.147	1	213987.147	14822.246	.000	.923	1.000
	Pre-Post	.319	1	.319	.022	.882	.000	.053
	RcSchool	12.861	1	12.861	.891	.345	.001	.156
	P-P*RcS	.063	1	.063	.004	.947	.000	.051
	Total	17958.507	1246					
Diversity	Corrected Model	19.725	3	6.575	.462	.709	.001	.144
	Intercept	268535.866	1	268535.866	18862.583	.000	.938	1.000
	Pre-Post	3.456	1	3.456	.243	.622	.000	.078
	RcSchool	10.817	1	10.817	.760	.384	.001	.140
	P-P*RcS	2.393	1	2.393	.168	.682	.000	.069
	Total	17715.609	1246					
Environment	Corrected Model	14.846	3	4.949	.246	.864	.001	.097
	Intercept	336380.714	1	336380.714	16736.772	.000	.931	1.000
	Pre-Post	11.651	1	11.651	.580	.447	.000	.118
	RcSchool	.034	1	.034	.002	.967	.000	.050
	P-P*RcS	.199	1	.199	.010	.921	.000	.051
	Total	24997.036	1246					

Table 5

Univariate Analysis of Variance by Gender for Experimental Group

Scale/ Subscale (D.V.)	Source	N	Total Mean	Control Group Mean	Exper. Group Mean	Std. Error	F	Sig.	Observed Power (Alpha=.05)
Mastery	Pre	622					7.047	.008	.755
	Boys	307	47.217	47.078	47.356	.594			
	Girls	315	49.463	49.084	49.841	.602			
	Post	620					2.759	.097	.382
	Boys	296	47.385	47.123	47.647	.604			
	Girls	324	48.806	47.990	49.623	.606			
Optimism	Pre	624					16.541	.000	.982
	Boys	309	13.313	13.231	13.395	.190			
	Girls	315	14.415	14.526	14.305	.194			
	Post	620					8.967	.003	.848
	Boys	296	13.551	13.434	13.668	.191			
	Girls	324	14.362	14.146	14.579	.192			
Self-Efficacy	Pre	622					5.184	.023	.623
	Boys	307	13.731	13.804	13.659	.202			
	Girls	315	14.386	14.295	14.477	.205			
	Post	620					4.507	.034	.563
	Boys	296	13.638	13.623	13.653	.201			
	Girls	324	14.243	14.021	14.465	.202			
Health	Pre	624					1.024	.312	.173
	Boys	309	20.223	20.144	20.302	.303			
	Girls	315	20.661	20.263	21.059	.309			
	Post	620					.000	.992	.050
	Boys	296	20.196	20.066	20.326	.319			
	Girls	324	20.201	19.823	20.579	.321			
Relatedness	Pre	623					33.288	.000	1.000
	Boys	309	72.449	71.971	72.927	.907			
	Girls	314	79.939	79.819	80.059	.929			
	Post	620					22.201	.000	.997
	Boys	296	71.792	72.000	71.584	.963			
	Girls	324	78.223	76.885	79.561	.967			
Trust	Pre	624					10.512	.001	.899
	Boys	309	13.260	12.846	12.907	.207			
	Girls	315	13.451	13.674	13.995	.211			
	Post	620					10.529	.001	.900
	Boys	296	12.108	12.132	12.084	.208			
	Girls	324	13.066	12.781	13.351	.209			

Support	Pre	624					27.943	.000	1.000
	Boys	309	14.544	14.279	14.810	.208			
	Girls	315	16.121	15.883	16.359	.213			
	Post	620					19.299	.000	.992
	Boys	296	14.580	14.349	14.811	.224			
	Girls	324	15.977	15.510	16.443	.225			
Comfort	Pre	624					17.425	.000	.986
	Boys	309	13.400	13.308	13.493	.218			
	Girls	315	14.703	14.642	14.764	.223			
	Post	620					6.854	.009	.743
	Boys	296	13.540	13.632	13.447	.236			
	Girls	324	14.414	14.188	14.640	.237			
Diversity	Pre	624					26.547	.000	.999
	Boys	309	14.844	14.673	15.015	.222			
	Girls	315	16.479	16.621	16.336	.227			
	Post	620					24.396	.000	.999
	Boys	296	14.944	15.019	14.868	.224			
	Girls	324	16.512	16.260	16.763	.225			
Environment	Pre	624					22.795	.000	.998
	Boys	309	16.784	16.865	16.702	.264			
	Girls	315	18.581	18.558	18.605	.269			
	Post	620					18.496	.000	.990
	Boys	296	16.621	16.868	16.374	.268			
	Girls	324	18.255	18.146	18.364	.269			

Table 6

Cross Tabulation Computations for each Significant Item-Inventory

Item #1

I will be successful when I grow up	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	3%	6%	12%	27%	53%
Experimental Pre	1%	5%	16%	27%	51%
Control Post	2%	4%	16%	21%	58%
Experimental Post	1%	2%	11%	29%	58%
Total Kids	2%	4%	14%	26%	55%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		5.827	4	.212	
Likelihood Ratio		5.753	4	.218	
Linear-by-Linear Association		.776	1	.378	
Experimental		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		11.533	4	.021	
Likelihood Ratio		10.880	4	.028	
Linear-by-Linear Association		6.698	1	.010	

*** 3 Significant Difference Chi-Square Tests @ p<.05 level**

Item #2

If I try hard it makes a difference	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	1%	7%	21%	24%	47%
Experimental Pre	1%	11%	19%	34%	35%
Control Post	1%	5%	18%	26%	51%
Experimental Post	2%	5%	23%	28%	42%
Total Kids	1%	7%	20%	28%	44%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		2.959	4	.565	
Likelihood Ratio		2.887	4	.577	
Linear-by-Linear Association		2.078	1	.149	
Experimental		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		12.958	4	.011	
Likelihood Ratio		12.470	4	.014	
Linear-by-Linear Association		2.408	1	.121	

*** 2 Significant Difference Chi-Square Tests @ p<.05 level**

Item #3

I am getting the exercise I need	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	1%	9%	26%	32%	32%
Experimental Pre	5%	8%	21%	28%	39%
Control Post	2%	7%	23%	31%	37%
Experimental Post	1%	8%	21%	32%	38%

Total Kids	2%	8%	23%	31%	37%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		3.061	4	.548	
Likelihood Ratio		3.105	4	.540	
Linear-by-Linear Association		1.143	1	.285	
Experimental		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		10.813	4	.029	
Likelihood Ratio		9.926	4	.042	
Linear-by-Linear Association		.871	1	.351	

* 2 Significant Difference Chi-Square Tests @ p<.05 level

Item #4

Other people treat me well	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	3%	7%	58%	21%	11%
Experimental Pre	5%	11%	30%	32%	22%
Control Post	3%	9%	56%	19%	12%
Experimental Post	2%	7%	34%	31%	26%
Total Kids	3%	9%	45%	26%	18%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		1.565	4	.815	
Likelihood Ratio		1.611	4	.807	
Linear-by-Linear Association		.008	1	.928	
Experimental		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		11.350	4	.023	
Likelihood Ratio		10.878	4	.028	
Linear-by-Linear Association		.933	1	.334	

* 2 Significant Difference Chi-Square Tests @ p<.05 level

Item #5

People accept me for who I am	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	4%	14%	20%	28%	34%
Experimental Pre	5%	14%	21%	25%	37%
Control Post	3%	10%	22%	28%	37%
Experimental Post	2%	9%	25%	25%	40%
Total Kids	3%	11%	23%	26%	38%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		3.760	4	.439	
Likelihood Ratio		3.654	4	.455	
Linear-by-Linear Association		2.194	1	.139	
Experimental		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		9.613	4	.047	
Likelihood Ratio		9.064	4	.060	
Linear-by-Linear Association		3.400	1	.065	

* 1 Significant Difference Chi-Square Test @ p<.05 level

Item #6

There are people who will help me if I need it	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	6%	11%	20%	22%	42%
Experimental Pre	2%	13%	20%	25%	41%
Control Post	3%	10%	18%	25%	45%
Experimental Post	2%	5%	19%	26%	48%
Total Kids	3%	9%	19%	25%	45%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		6.877	4	.143	
Likelihood Ratio		6.462	4	.167	
Linear-by-Linear Association		3.871	1	.049	
Experimental		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		12.880	4	.012	
Likelihood Ratio		12.099	4	.017	
Linear-by-Linear Association		6.658	1	.010	

* 3 Significant Difference Chi-Square Tests @ p<.05 level

Item #7

I feel supported	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	6%	10%	23%	28%	33%
Experimental Pre	4%	13%	24%	27%	32%
Control Post	3%	7%	24%	29%	37%
Experimental Post	3%	6%	25%	30%	37%
Total Kids	4%	9%	24%	29%	35%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		7.426	4	.115	
Likelihood Ratio		7.028	4	.134	
Linear-by-Linear Association		5.036	1	.025	
Experimental		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		9.820	4	.044	
Likelihood Ratio		9.252	4	.055	
Linear-by-Linear Association		4.444	1	.035	

* 2 Significant Difference Chi-Square Tests @ p<.05 level

Item #8

I respect people who are different than me	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	0%	6%	15%	22%	57%
Experimental Pre	.5%	7%	17%	19%	57%
Control Post	1%	3%	14%	25%	57%
Experimental Post	1%	3%	15%	27%	55%
Total Kids	1%	5%	15%	23%	57%
Control		Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square		6.507	4	.164	

Likelihood Ratio	7.516	4	.111
Linear-by-Linear Association	.369	1	.544
Experimental	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.411	4	.034
Likelihood Ratio	10.374	4	.035
Linear-by-Linear Association	.187	1	.666

*** 2 Significant Difference Chi-Square Tests @ p<.05 level**

Item #9

I get a lot of encouragement at my school	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	5%	11%	30%	23%	32%
Experimental Pre	3%	16%	26%	29%	27%
Control Post	4%	15%	28%	27%	26%
Experimental Post	4%	10%	20%	31%	35%
Total Kids	4%	14%	27%	26%	29%
Control	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	5.244	4	.263		
Likelihood Ratio	5.290	4	.259		
Linear-by-Linear Association	1.665	1	.197		
Experimental	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	12.420	4	.014		
Likelihood Ratio	12.425	4	.014		
Linear-by-Linear Association	3.462	1	.063		

*** 2 Significant Difference Chi-Square Tests @ p<.05 level**

Item #10

School will help me be successful	Never	Rarely	Sometimes	Often	Almost Always
Control Pre	2%	6%	11%	17%	64%
Experimental Pre	1%	8%	14%	23%	55%
Control Post	1%	4%	12%	17%	66%
Experimental Post	1%	3%	11%	21%	65%
Total Kids	1%	5%	12%	20%	63%
Control	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	2.588	4	.629		
Likelihood Ratio	2.455	4	.653		
Linear-by-Linear Association	.984	1	.321		
Experimental	Value	df	Asymp. Sig. (2-sided)		
Pearson Chi-Square	11.908	4	.018		
Likelihood Ratio	11.364	4	.023		
Linear-by-Linear Association	7.936	1	.005		

*** 3 Significant Difference Chi-Square Tests @ p<.05 level**