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A Study of the Efficacy of a Computerized Behavioral Skill Building Program in Increasing Emotional Intelligence in High School Students

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Background Literature

Statement of Purpose

The term emotional intelligence was brought to public attention by Daniel Goleman in 1995 (Goleman, 1995) and refers to social and emotional skills such as self-awareness, self-motivation, empathy, mood management and peer relations. In his book, *Emotional Intelligence*, Goleman reported that IQ is only a minor predictor of success in life, however, emotional and social skills are far better predictors of success and well-being than academic intelligence (Goleman, 2006). The significance of this statement is that the focus is shifted to learnable, social-emotional skills, which is shared by an increasing number of psychologists, counselors, administrators and teachers all over the world. This study is intended to extend a previous pilot study by Repa and Stern (2000). It will evaluate whether, and under what conditions a computer-based, social emotional skill building program can be effective in improving high school students' social behavior and their academic performance.

Research Questions

The study will ask the following research questions:

1. Did the *Relate for Teens* computer program improve students' social behavior?

2. Under what conditions is the program most successful?

3. Did the program positively impact students' academic performance?

Method

Design

The design involves comparing three groups of high school students at an urban high school in the Midwest. Students are randomly assigned to one of three groups during the spring term of the academic year. There will be two experimental groups and one control group. Designation as experimental, (experimental condition or experimental condition PLUS) or control group is also randomly assigned. Both of the experimental groups have access to the computer program for the length of the entire 14-week semester. One of the two experimental groups, experimental condition, will use the computer program as a stand-alone intervention, without teacher assistance except for assigning lessons. The second experimental group, experimental condition (PLUS) uses the computer program with the assistance of a teacher who will facilitate role-plays and discussions. The control group receives no intervention.

Sample

Students. The participants in this study are high school students, grades 9 and 10. The school is located in a large urban school district in the Midwest. Students are randomly assigned to one of three groups. Each of three groups consists of students that range in academic ability; each will include a small number of students who attended Special Education classes. By including students from varied and diverse backgrounds, in terms, of their cognitive abilities, readiness levels and learning styles this will serve to further enrich the study and the knowledge gained. A total of 105 students will participate in the study.

The first intervention group, experimental condition, includes 35 students, (52% males and 48% females). The second intervention group, experimental condition PLUS, includes 35 students, 45% male and 55% females. Additionally, there are 35 students in the control group (42% males, 58% females). It is anticipated that the composition of the sample groups will represent that of the high school, with 78% African-American, 12% Hispanic, 6% Other/Multiracial, and 4% Caucasian. This sample will have a greater percentage (about 96%) of non-Caucasian students than the national average.

Teachers. Two teachers will be selected to participate in the study, one each from grades 9 and 10. The demographics of the teachers selected will represent that of the high school, which is 86% Caucasian, 11% African-American, 2% Hispanic and 1% Other/Multiracial.

Materials for Conditions

Experimental Conditions. The computer program chosen for this study is *Relate for Teens*. It covers more than 350 topics relevant to adolescents. *Relate for Teens* was created using research proven strategies and research from education, psychology and prevention studies. It is a database of media driven examples of best practices in prevention. Underpinning the program is the *Whole Spectrum Learning System@,* a proprietary, technology based learning method. The learning system includes a collection of scenario based case studies, cognitive frameworks, behavioral training, affective motivation through true video stories, peer modeling videos, interactive writing exercises, media analysis exercises, role play instructions, interactive self-profiles, and interactive, objective assessment exercises.

The program has a sound to text equivalent throughout the program to increase the chance that students with low reading ability or English as a second language can succeed with

it. The program has computer based writing exercises with drag and drop word prompts that serve as a bridge to communication for low language level students and type your-own-blanks, which offers open-ended opportunities, for more proficient students. The writing entries are saved in an electronic journal, which is password protected for each student and encrypted to further protect students privacy. Teachers cannot access journal entries without students' permission.

Experimental Condition. The first intervention group will be assigned twenty-four topics in the *Relate for Teen*s program that are expected to be completed during the course of the semester, averaging two per week in the following sequence: respect, kindness, paraphrasing, making space for others, giving compliments, name calling, ignoring, racial slurs, bullying, appreciating diversity, predicting feelings, identifying feelings, courtesy, body language, asking questions, expressing thanks, fighting, resolving conflicts, put downs, sexual harassment, stereotypes/labels, taking someone's point of view, understanding feelings, and identifying with others. Participants in this group will receive the *Relate for Teen* computer program and use it independently as a stand-alone intervention; a teacher will assign topics only each week. The students in this group will interact with the computer program independently several times per week, during 8th period (after-school) for 45-minutes.

Experimental Condition PLUS. The second intervention group will also be assigned the same twenty-four topics from the *Relate for Teen*s program that are expected to be completed during the course of the semester, averaging two per week following the same sequence as experimental condition one: respect, kindness, paraphrasing, making space for others, giving compliments, name calling, ignoring, racial slurs, bullying, appreciating diversity, predicting

feelings, identifying feelings, courtesy, body language, asking questions, expressing thanks, fighting, resolving conflicts, put downs, sexual harassment, stereotypes/labels, taking someone's point of view, understanding feelings, and identifying with others. In addition to receiving the *Relate for Teens* computer program, a Teacher will provide guidance with exploring assigned topics. Specifically, the Teacher will facilitate role-plays and/or lead topic discussions once per week. Likewise, the students in this group will use the computer program several times per week, during 8th period (after-school) for 45-minutes.

Teacher Materials for Experimental Condition PLUS. Two teachers will receive *Relate for Teens* Facilitator guides to provide background and content knowledge about each of the twenty-four assigned topics that will be covered during the term of the study. Teachers will use these materials for the purpose of guiding discussions, exploring topics with students and facilitating role-plays.

Control Condition. The control group will not have access to the *Relate for Teens* program nor the teacher facilitated role-plays and discussions. Students will only participate in traditional high school courses.

Data Sources

There are four dependent measures: 1. Reduction of referrals, 2. Completion of topics, 3. Semester grades, and 4) Content Test on *Relate for Teens* program material. Each measure is aligned with and addresses a respective research question.

Reduction of referrals. The reduction of referrals and/or detentions will be used to determine if the *Relate to Teens* computer program improved students' social behavior.

Completion of topics. Completion of the computerized assessments associated with each of the 24 topics will be used to determine under which condition that the *Relate for Teens* computer program is most successful, either when students work independently using program as a stand-alone or when students use program facilitated by a teacher.

Semester grades. The students' semester grades will be used to determine if the program has a positive impact on the students' academic performance.

Content Test. At the conclusion of the 14-week study, all student participants will take a content test that will cover information on the twenty-four topics from the *Relate for Teens* computer program. The content test will be comprised of 50 questions, a combination of multiple choice and short answers. In addition, the content test will contain the following question: "Describe how *Relate for Teen*s computer program has improved your behavior and academic performance". This is an open-ended question that is social emotional in nature and is intended to prompt a reflective response from participants.

Procedures

All Conditions. Before the study can begin, the researcher will obtain approval from the Human Subject Review Board to conduct this research. Next, permission will be obtained from the school district, the school principal and the participating teachers. Two teachers, one each from grades 9 and 10, will be selected for the study and will attend a 3-hour workshop on how to use the *Relate for Teens* Facilitator's Guide and computer program. Teachers will submit a list of names for all 9th and 10th grade students. Then, informed consent forms will be mailed out to both parents and students. Those students which whom the parents give permission and who agree to participate in the study will comprise the sample group. Participating students will be

randomly divided into three groups, two experimental groups (experimental condition and experimental condition PLUS) and a control group. The intervention study will begin in February and continue until the end of the semester in June, 14-weeks.

Teachers. The two teachers selected to participate in the study will receive a 3-hour professional development workshop on how to use the *Relate for Teens* Facilitator's Guide and the computer program. This workshop will provide background information and content knowledge about each of the twenty-four assigned topics that will be covered during the study. Teachers will use the materials in the Facilitator's Guide for the purpose of guiding discussions, exploring topics with students and facilitating role-plays. Additionally, the workshop will be held in the high school, after school, at a time that is convenient for the teachers. The scheduled workshop will be conducted during the process of waiting to receive the parent and student consent and before selecting student participants.

Both Experimental Conditions. The *Relate for Teens* software intervention occurred in two forms.

Experimental Condition. The first intervention group will receive the *Relate for Teens* computer program to use independently, though a teacher will assign weekly topics and is available for questions related to trouble-shoot any program-related problems and/or questions, if they should arise, but mainly the students will work independently. Participants will use the computer program several times per week during 8th period (after-school) for 45-minutes over a 14-week period. Twenty-four topics will be covered, averaging two per week in the following sequence: respect, kindness, paraphrasing, making space for others, giving compliments, name calling, ignoring, racial slurs, bullying, appreciating diversity, predicting feelings, identifying

feelings, courtesy, body language, asking questions, expressing thanks, fighting, resolving conflicts, put downs, sexual harassment, stereotypes/labels, taking someone's point of view, understanding feelings, and identifying with others. Students will work independently to complete each of the computerized assessments associated with the twenty-four topics and will save their writing entries in an electronic journal, which is password protected for each student and encrypted to further protect students privacy. Teachers cannot access journal entries without students' permission.

Experimental Condition PLUS. The second intervention group will use the *Relate for Teens* computer program several times per week during 8th period (after-school) over the same 14-week period, and, in addition, will receive assistance from a teacher who will facilitate role-plays and/or lead topic discussions, once a week. Once per week, the teacher will assign topics that students are expected to complete for the week and will assist students by facilitating a 7-8 minute topic discussion and/or organize a role-playing activity related to the social emotional topic covered that week. In addition, the teacher is available for questions related to trouble-shoot any program-related problems and/or questions, if they should arise. Students will then be expected to complete the topic assessments independently. Twenty-four topics will be covered, averaging two per week in the following sequence: respect, kindness, paraphrasing, making space for others, giving compliments, name calling, ignoring, racial slurs, bullying, appreciating diversity, predicting feelings, identifying feelings, courtesy, body language, asking questions, expressing thanks, fighting, resolving conflicts, put downs, sexual harassment, stereotypes/labels, taking someone's point of view, understanding feelings, and identifying with others. Students will complete each of the computerized assessments associated with the twenty-

four topics and save their writing entries in an electronic journal, which is password protected for each student and encrypted to further protect students' privacy. Teachers cannot access journal entries without students' permission.

Control Condition. The control group will not have access to the *Relate for Teens* program nor the teacher facilitated role-play and discussions. Students will only participate in their traditional high school coursework.

Fidelity of Treatment

Two separate checklists of tasks and activities will be developed for each experimental condition, in advance, and provided to the Teachers and graduate students who are assisting with data collection. These checklists of expected tasks and activities provided to teachers and graduate students will serve as a guide of the types of activities which should be occurring during the 45-minute period, respective to each of the two experimental groups. Also, it will serve as a reference for the researcher during selected classroom observations. The researcher will observe students during randomly selected sessions to ensure that the procedures being implemented are the same as outlined in the checklist.

Scoring Procedures and Reliability of Scoring

The researcher will hire and train four graduate students that will assist with the scoring to ensure that scoring procedures are standardized. Two graduate assistants will cross-check the scoring.

All Conditions. For the following measures: Referrals, Semester grades and Content test. The researcher will keep a tally of referrals for each participant, which will be crossed-

referenced with the previous semester to determine if there are any significant changes and the frequency of change. The researcher will gather semester grades for each student participant that will be recorded and cross-referenced with the prior semester grades to determine if there are any significant changes and the frequency of change. Also, each student from all groups will complete a content test which will assess information from the twenty-four topics covered in the *Relate for Teens* program.

Experimental Conditions. The researcher will keep a tally of the total number of assessment topics completed by both the experimental condition and the experimental condition PLUS for comparison and to determine which condition was most successful in completing all twenty-four topics. A rubric will be developed for the content test and used for scoring. The content test will consist of a total of 50 multiple choice and short answer questions.

Proposed Data Analysis

Each of the four data sources collected will be analyzed comparing the mean performance for the content test, semester grades, completion of assessment topics and referrals, across the three conditions.

References

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