

**THE EFFECT OF MOZART'S MUSIC
ON SOCIAL LEARNING BEHAVIOR
OF HIGH SCHOOL STUDENTS**

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Chapter 1

THE PROBLEM AND ITS BACKGROUND

Introduction

The Youth of today live in a world wherein numerous stimuli exist. These stimuli may either supplement or hinder their intellectual growth. The Youth are surrounded by all of these stimuli and significantly divide their attention, resulting to low academic performance in school, an outcome undesired by their parents. An ideal student should be productive in all school activities, contributing to social development programs and mainly attaining high academic performance represented by high grades. The education of the Youth is an important mission and should be continuously updated for supplementary programs that could improve and develop intellectual growth.

The researcher acknowledges the importance of creativity and innovation in terms of discovering more methods or strategies on improving intellectual growth of an individual, in this case, the researcher focuses on the Social Learning Behavior of high school students. Based on the work experience of the researcher as a High School Counselor for nine (9) years, many high school students are vulnerable to low academic performance due to numerous factors. As the increase of high school students who have low academic performance, programs in improving and developing academic performance should be implemented along with instilling proper discipline and motivation to students. The researcher would like to discover other possible programs that could enhance learning and eventually improve academic performance.

About 15 years ago, a professor of psychology stirred up the music world with the idea that listening to Mozart could make you smarter. Before the decade was out, the work of Dr. Frances H. Rauscher, professor of psychology at the University of Wisconsin Oshkosh, had brought forth a veritable flood of pop-psych books, tapes, and CDs promising in newspaper inserts and on television infomercials to boost your brain. One enterprising author even went so far as to trademark the phrase "The Mozart Effect."¹

As high school students of today, there are a lot of distractions that could disrupt study habits, review programs, and research specially when out of the school campus. Internet, games, media, sports, peers, social problems, and other types of entertainment play tug of war with the time for reading, research, and review. There is a need for supplements to aid the education of our Youth. In this study, the researcher would like to discover if Mozart's music can elicit any form of behavior that would lead to learning, creating an environment that would be conducive for learning in the academic and social setting of high school students.

¹ David Roden, Posts Tagged 'Mozart Effect': The Mozart Effect Revisited
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Background of the Study

The researcher is currently employed as the Guidance Counselor of the High School Department in Systems Plus College Foundation, Angeles City. During this school year, 2009-2010, there are approximately one (1) thousand high school students with numerous concerns on the development and improvement of their psychological, intellectual and spiritual growth. The main concern that has caught the attention of the researcher is how to improve low academic performance of students. This concern started because of the increasing number of cases in which parents visit the Guidance Office and seek advice on how to improve the academic performance of their children.

An estimated thirty (30) percent of the student population have low academic performance and are struggling to improve their grades for the first grading period. In line with this, the researcher is motivated to look for supplements that would help Social Learning Behavior of students so as to improve academic performance.

To have a clear perception about the research environment that will be utilized in this study, the researcher made an effort to present a brief background about the location. Systems Plus College Foundation (SPCF) is located in Balibago, Angeles City and was established on June 27, 1985. At present, Systems Plus College Foundation (SPCF) offers Pre-Elementary, Elementary, High School and College Courses.

With the vision of developing human resources that are responsive to the needs of the country, with the versatility to cope with the fast changing times, without compromising their values, Systems Plus College Foundation (SPCF) is one of the

leading institutions in Computer Education in Angeles City. The mission of Systems Plus College Foundation (SPCF) is to produce graduates widely admired for their professional competence, innovative skills, dedication to work and, above all, for their integrity and good values and right attitudes in the practice of their profession.

Albert Bandura believed in "reciprocal determinism", that is, the world and a person's behavior cause each other, while behaviorism essentially states that one's environment causes one's behavior, Bandura, who was studying adolescent aggression, found this too simplistic, and so in addition he suggested that behavior causes environment as well. Later, Bandura soon considered personality as an interaction between three components: the environment, behavior, and one's psychological processes (one's ability to entertain images in minds and language).²

The researcher would like to consult with Bandura's "reciprocal determinism" as one of the references for this study, if Mozart's music would have a significant effect on the Social Learning Behavior of high school students. This would involve adolescent behavior, the environment and psychological processes. In the pursuit of discovering additional methods that would enhance learning by eliciting any form of learning behavior on both academic setting and social setting of high school students, this study will test the "Mozart Effect Phenomenon" and its significant effects on Social Learning Behavior of high school students.

² Dr. C. George Boeree, ALBERT BANDURA 1925 - present, Copyright C. George Boeree 1998, 2006.

Conceptual Framework

Education is very important, and every parent, teacher and educator would agree that the Youth need a good and stable foundation of education. The Youth should be given the best methods of education in order to make them competent individuals. Proper education would increase the Youth's chances for golden opportunities in the future and eventually a successful life.

If the environment of the Youth, in their academic and social setting, would set a positive mood that would elicit any form of behavior that would lead to learning, then the probability of attaining good academic performance would be close at hand. This environment would be ideal for every student, inside or outside the classroom setting. This environment would create positive results for all students, academically and socially. The researcher would like to create that particular environment, fabricating an educational atmosphere that would be a catalyst to learning. The researcher would create an environment that would be ideal for educational institutions and will enhance social learning behavior of every student. The researcher believes that the element needed in establishing that ideal environment for learning is music.

This study aims to discover the effect of Mozart's music on the Social Learning Behavior of high school students. The study will focus on establishing an ideal environment that would use Mozart's music to elicit any form of behavior leading to learning. This study also aims to improve academic performance of high school students.

The schematic diagram in figure 1 was done to guide the reader of this study, using the Input-Process-Output Model (IPO).

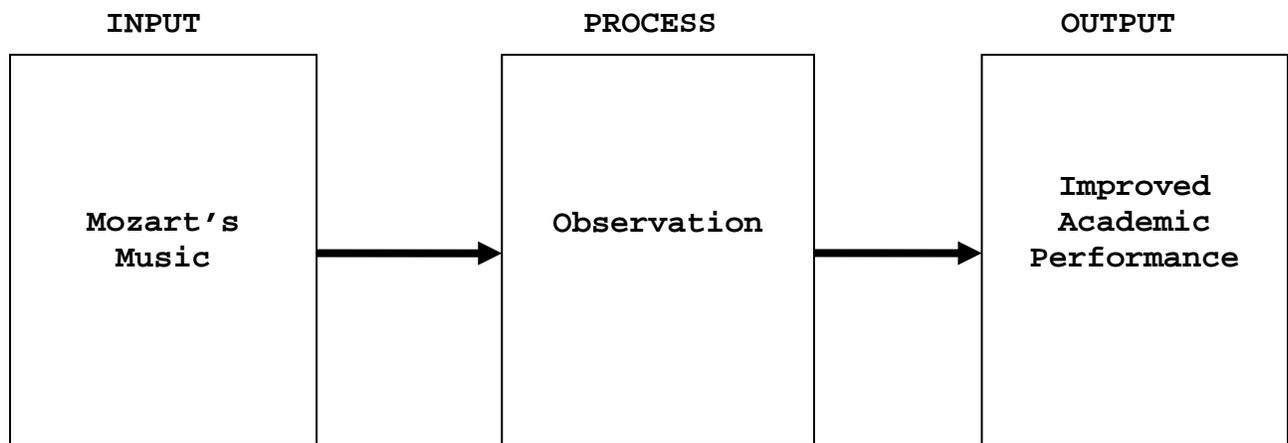


Figure 1 - Conceptual Framework Paradigm
(Input-Process-Output Model)

Statement of the Problem

This study aims to determine the effect of Mozart's music on the Social Learning Behavior of high school students in Systems Plus College Foundation, Angeles City during the school year 2009-2010.

This study attempts to answer the following questions:

1. What is the dynamics of the high school students before the exposure to Mozart's music in terms of:
 - a. Social
 - b. Academic

2. What is the effect of Mozart's music on the Social Learning Behavior of high school students in terms of:
 - a. Social Interaction
 - b. Learning

3. What youth development program can be recommended based from the result of the study.

Null Hypothesis

Mozart's music has no significant effect on the Social Learning Behavior of high school students.

Significance of the Study

The researcher would like attempt to discover different methods in improving the Social Learning Behavior of high school students, utilizing essential tools to further develop academic performance. Taking into consideration the different possible factors that may improve learning among high school students, not only in the classroom but also outside the classroom setting. The study will serve as a reference for the

administration and high school faculty of Systems Plus College Foundation in establishing an ideal environment that would enhance students' learning, in academic and social settings, within the institution.

The study could also help tutorial services rendered by teachers in Angeles City, it could be implemented in study habits and private tutorial sessions. Elementary and High School Public teachers could also benefit from the study by using Mozart's music and eliciting any form of behavior that would lead to learning of their students.

The present Alternative Learning System (ALS) of the local government for out of school youth (OSY) could benefit from the study since the nature of their education are in forms of reviews and lectures before they take the jump test (PEPT) that would help them qualify to enter college. The study would like to establish an environment that would set the proper attitude and proper motivation for a more efficient and effective education with the use of Mozart's music.

Systems Plus College Foundation, High School Department offers an Open High School System (OHSS) which allows working individuals, who have not graduated from high school, to continue their studies in a module based program. In Angeles City, Systems Plus College Foundation is the only institution that the Department of Education has approved for this program. The modules are from the Department of Education and are given to the OHSS students for review and examinations. The study may benefit the Head of the OHSS program by using Mozart's music to set the proper motivation and attitude of students.

Classical music has been used for relaxation and meditation by many individuals for many years now. The researcher aims to

discover if Mozart's music could create an environment that would elicit any form of behavior that would lead to learning. Other institutions in Angeles City could use the study as reference to their education programs in their respective schools. Considering the fact that there are many high schools in Angeles City, all of them could benefit from the study. To name a few are:

- Holy Family Academy (HFA)
- Chevalier School (CS)
- Holy Angel University (HAU)
- Angeles University Foundation (AUF)
- Republic Central Colleges (RCC)
- Jocson College Inc. (JCI)
- OB Montessori
- Westfields International School
- Nepomoceno High School (FGNMHS)
- Lazatin High School (RFLMHS)
- Angeles City National Trade School (ACNTS)
- Angeles City High School (ACHS)
- Clarkfield High School

The study could serve as a guideline for improving learning abilities of children in their nursery, kindergarten and elementary stages. The school could create an ideal environment for these children so that they would learn faster and more efficient. If Mozart's music could elicit any form of behavior leading to learning, then it would enhance the learning process of children, making them learn faster in their academic and social setting. In the early stages of education, any form of supplement that would make education efficient and effective should be taken into consideration. It is during these stages

that education is a big influence on their growth and development. If the effects of Mozart's music could elicit any form of behavior leading to learning, then our young children would surely benefit from this study by creating an atmosphere conducive for fast and efficient learning.

Scope and Limitation

The study will focus on Mozart's music and the effect it has on the Social Learning Behavior of high school students in Systems Plus College Foundation, Angeles City. The researcher chose only Mozart's music because of the "Mozart Effect Phenomenon". This study will further validate if Mozart's music could have a significant effect on the Social Learning Behavior of students in their academic and social setting.

The scope of the study will involve the Social Learning Behavior of high school students in their academic and social setting, particularly in Systems Plus College Foundation. There is already an existing culture in this institution and this study attempts to discover the effects of Mozart's music on the existing dynamics of the students, specifically in their Social Learning Behavior. In this study, the researcher would like to discover if Mozart's music could elicit any form of behavior leading to learning.

All participants of the study are high school students enrolled in Systems Plus College Foundation, Angeles City. Only the Social Learning Behavior of these students and Mozart's music will be involved in this study.

Definition of Terms

Mozart's music - musical compositions of Wolfgang Amadeus Mozart
ex. Piano Concerto No.23 in A Major K.448 (Presto) (7mins
53secs)

Social Learning Behavior - any form of behavior of a student
that may lead to learning in their social and academic
environment

High School students - adolescents enrolled in Systems Plus
College Foundation High School Department.

Academic Environment - the environment of the student during
class; classroom setting

Social Environment - the environment of the student during their
free time; lunch break, recess

Chapter 2

REVIEW OF RELATED LITERATURE

In 1993, Dr. Frances H. Rauscher, professor of psychology at the University of Wisconsin Oshkosh, had a group of college students mentally unfold a piece of paper and try to identify its shape. She found that the students who had listened to a recording of Mozart's K448 sonata were better and faster at the task. Dr. Rauscher published the results in the journal *Nature* in the same year. There were only two problems with the Mozart Effect. One was that it didn't last: the students only held on to their newly acquired spatial skills for ten or fifteen minutes. The other problem was that when other researchers tried to verify the effect, some just couldn't. So, over the years since, the idea that Mozart can make you smarter has lost much of its credibility. However, a recent study has found that the Mozart Effect is real – but only for certain people. It definitely works for right-handed non-musicians.³

Effects of Music Training on Individuals

- Local/ International Studies

Studies about the concept that music training enhances IQ have received a lot of attention from researchers. The report from Schellenberg is the first to test this hypothesis directly

³ David Roden, Posts Tagged 'Mozart Effect': The Mozart Effect Revisited
Copyright August 4th, 2009.

with random assignment of a large sample of children (N = 144) to two different types of music lessons (keyboard or voice) or to control groups that received drama lessons or no lessons. IQ

was measured before and after the lessons. Compared with children in the control groups, children in the music groups exhibited greater increases in full scale IQ. The effect was relatively small, but it generalized across IQ subtests, index scores and a standardized measure of academic achievement. Unexpectedly, children in the drama group exhibited substantial pre- to post- test improvements in adaptive social behavior that were not evident in music groups.⁴

Another concept that music training can improve verbal memory was tested in children. The results showed that children with music training demonstrated better verbal but not visual memory than did their counterparts without such training. When these children were followed up after a year, those who begun or continued music training demonstrated significant verbal memory improvement. Students who discontinued the training did not show any improvement. Contrary to the differences in verbal memory between the groups, their changes in visual memory were not significantly different. Consistent with previous findings for adults (A.S. Chan, Y. Ho, & M. Cheung, 1998), the results suggest that music training systematically affects memory processing in accordance with possible neuro-anatomical modifications in the left temporal lobe.⁵

⁴ E. Glenn Schellenberg, Music Lessons Enhance IQ, Psychological Science, Vol. 15, University of Toronto at Mississauga, Ontario, Canada, American Psychological Society Copyright 2004.

⁵ Y. Ho, A. Chan, & M. Cheung Music Training Improves Verbal but not Visual Memory: Cross- Sectional and Longitudinal Explorations in Children, University of Hong Kong, Neuropsychology Vol. 17, No. 3, 439-450, Copyright American Psychological Association, Inc. 2003.

- Local/ International Literature

At present, much empirical research has been motivated by the hypothesis that formal training music has nonmusical benefits. It is now well established (for reviews see Schellenberg, 2005,2006a) that taking music lessons is associated positively with performance on tasks that measure abilities in the domains of language (e.g. Marques, Moreno, Castro, & Besson, 2007; Moreno et.al., 2008; Patel & Iversen, 2007), spatial reasoning (Hetland, 2000), mathematics (Vaughn, 2000), memory (e.g. Jakobson, Lewyky, Kilgour,& Stoesz, 2008; Lee, Lu, & Ko, 2007) full-scale IQ (FSIQ; Schellenberg, 2004, 2006b), and virtually any other domain one chooses to study (e.g. Hughes & Franz, 2007; Stoesz, Jakobson, Kilgour, & Lewyky, 2007). The simplest explanation of the available data is that children with high FSIQs are more likely than other children to take music lessons and to do well on any test they are given (Schellenberg, 2006b). Nonetheless, many scholars including Tierney, Bergeson, and Pisoni (2008) and most of the cited above, continue to promote the notion of links between music training and specific sub-areas of intellectual functioning, which is tantamount to failing to see the forest(i.e. the big picture) for the trees (i.e. minor details; see Schellenberg & Peretz, 2008).⁶

⁶ E. Glenn Schellenberg, Commentary on "Effects of Early Musical Experience on Auditory Sequence Memory" by Adam Tierney, Tonya Bergeson, and David Pisoni, *Empirical Musicology Review* Vol. 3, No. 4, University of Toronto, 2008).

Mozart Effect Phenomenon

- Local/ International Studies

A study was conducted about the effect of music listening for performance on a 25-question portion of the analytical section of the Graduate Record Exam by 72 undergraduate students (M age 21.9 yr.). Five levels of an auditory condition were based on Mozart Piano Sonata No. 3 (K. 281), Movement I (Allegro); a rhythm excerpt; a melody excerpt; traffic sounds; and silence. Participants were randomly assigned to one of the stimuli. After a 5-min., 43-sec. (length of the first Allegro movement) listening period, participants answered the questions. Analysis indicated participants achieved significantly higher mean scores after all auditory conditions than those in the silent condition. No statistically significant pairwise mean difference appeared between scores for the auditory conditions. Findings were interpreted in terms of an arousal framework, suggesting the higher means in all auditory conditions may reflect immediate exposure to auditory stimuli.⁷

However, another study has shown no evidence of a Mozart effect in upper-primary-school-age children. Children performed no differently on tests of spatiotemporal reasoning following passive exposure to Mozart, popular music, or silence. Predictions made by the trion model were not upheld. Despite

⁷ Edward A Roth, Kenneth H Smith, THE MOZART EFFECT: EVIDENCE FOR THE AROUSAL HYPOTHESIS, Perceptual and Motor Skills. Missoula: Oct 2008. Vol. 107, Iss. 2; pg. 396, Copyright 2009.

being rated as more complex by the children, K. 448 did not enhance spatiotemporal performance compared to repetitive music or silence. Taken together, theoretical concerns with the trion model (cf. Schellenberg, 2001) and the lack of behavioral data demonstrating a Mozart effect in children (Hallam, 2000; McKelvie & Low, 2002) suggest that complex music does not prime children's brains for spatiotemporal tasks. In contrast, predictions of the arousal-mood model were partly upheld. Exposure to popular music was associated with enhanced positive mood, arousal, and increased preference; however, these changes did not result in improved spatiotemporal performance. Rather, participants in this study showed short-term stability in their performance of the spatiotemporal task, with pretest spatiotemporal performance most strongly predicting posttest experimental scores.⁸

- Local/ International Literature

There is much attention that has recently been drawn to the possibly positive effects of listening to Mozart or other classical music on cognitive performance. Students listening to Mozart's piano music for 10 minutes before testing performed better in IQ spatial reasoning tasks than when they had listened to a relaxation tape or remained in conditions of silence. Repetitive music had no positive effect on spatial reasoning or

⁸ Rudi Crnec, Sarah J Wilson, Margot Prior, NO EVIDENCE FOR THE MOZART EFFECT IN CHILDREN; [2] ,Music Perception. Berkeley: Apr 2006. Vol. 23, Iss. 4; pg. 305, 13 pgs Copyright University of California Press Apr 2006.

short-term memory performance measured with 16 short-term memory items. While the effect of Mozart's classical music on intellectual performance of the students was consistent in the in the above studies, the neurophysiological basis of this effect has remained obscure.⁹

Furthermore, present interests in associations between music and intelligence stems from two independent areas of research (Schellenberg, 2003). One focuses on the short-term effects of simple listening to music. The so called Mozart effect refers to the finding that passive listening to music composed by Mozart produces temporary increases in spatial abilities (Hetland, 2000b; Rauscher, Shaw, & Ky, 1993). Subsequent studies indicate, however, that the Mozart effect is difficult to replicate (Chabris, 1999; Steele, Bass, & Crook, 1999; Steele, Dalla Bella, et al., 1999) When evident, it can be attributed to differences in arousal and mood generated by different testing conditions (Husain, Thompson, Schellenberg, 2002; Nantais & Schellenberg, 1999; Thompson, Schellenberg, & Husain, 2001) Compared with sitting in silence for 10 minutes, listening to Mozart induces more positive moods and relatively optimal levels of arousal, which lead to higher levels of performance on tests of spatial abilities.¹⁰

⁹ Synnove Carlson, Pia Rama, Denis Artchakov, Ilka Linnanski, Learning And Memory, Neuro Report Vol. 8, No. 13, Effects of music and white noise on working memory performance in monkeys, University of Helsinki, Finland, 1997).

¹⁰ E. Glenn Schellenberg, Music Lessons Enhance IQ, Psychological Science, Vol. 15, University of Toronto at Mississauga, Ontario, Canada, Copyright American Psychological Society 2004).

Despite issues with face validity, the Mozart Effect has been seriously discussed in such prestigious publications as *Science* and *Nature*, and still frequents the pages of respected psychology journals. At times, there have been problems replicating the basic effect, but it has been suggested by Rauscher, Shaw, and Ky (1998) that inconsistent results by other researchers can be attributed to methodological differences.

Although other researchers cited that because of multiple intelligences, the Mozart effect, and emotional intelligence theories have inadequate empirical support and are not consistent with cognitive neuroscience findings, these theories should not be applied in education. Proponents countered that their theories had sufficient empirical support, were consistent with cognitive neuroscience findings, and should be applied in education (Cherniss, Extein, Goleman, & Weissberg, 2006; Gardner & Moran, 2006; Rauscher & Hinton, 2006). However, Gardner and Moran offered no validating evidence for multiple intelligences, Rauscher and Hinton concluded that "listening-to-Mozart" studies should be disregarded, and Cherniss, Extein, Goleman, and Weissberg agreed that emotional intelligence lacked a unitary empirically supported construct.¹¹

On the other hand, studies from Nantais and Schellenberg (1999) had no difficulty replicating the basic finding: That is, they found a significant increase in performance on spatial-temporal tasks for subjects that heard a musical piece; but, there was no marked difference between those that heard Mozart

¹¹ Lynn Waterhouse, *Inadequate Evidence for Multiple Intelligences, Mozart Effect, and Emotional Intelligence Theories*, *Educational Psychologist*, Philadelphia Vol. 41, Iss. 4; pg. 247, Copyright 2006.

or those who heard Schubert. Likewise, other researchers (e.g., Ashby, Isben, & Turken, 1999; Steele, Bass, & Crook, 1999) also observed that changes in mood can have a significant effect on cognitive performance, and that the original experimental conditions (e.g., listening to Mozart, relaxation music, or silence) likely each have an affect on mood and arousal. As such, the argument emerged that observed performance differences may occur due to improvements in mood and arousal rather than from neurophysiological priming. In addition, Thompson, Schellenberg, and Husain (2001) reported that individuals that listened to Mozart performed better on spatial tasks, but also scored higher on positive mood and arousal ratings. Subjects that scored low on mood and arousal showed no effect of the music. By examining participant's spatial abilities after listening to a Mozart sonata (expected to produce positive mood), and an adagio by Albinoni (a sad piece), they were able to provide additional support for the arousal and mood hypothesis.¹²

¹² H. D. Cassity, T. Henley, R. Markley, The Mozart Effect: Musical Phenomenon or Musical Preference? A More Ecologically Valid Reconsideration, *Journal of Instructional Psychology*. Mobile: Mar 2007. Vol. 34, Iss. 1; pg. 13, 5 pgs, Copyright Journal of Instructional Psychology Mar 2007.

Effects of Background Music on Individuals

- Local/International Studies

One large study of 20,000 people showed music changes mood and the changes in mood were very uniform. A large number of people listened to classical music by various composers from various musical periods and were asked how the music made them feel. Another study showed that the effects of mood varied from person to person depending on their musicality. Non-musical people enjoy music rarely and when they do, the enjoyment is slight, while semi-musical people enjoy music quite often and when they do, it is enjoyable to them, while musical people enjoy music rarely, due to discriminating tastes, but when they do, it is with the greatest intensity.¹³

An eight month study was conducted by Frances H. Rauscher of the University of California at Irvine, in which 19 preschoolers, ranging in age from three to five, received weekly keyboard and daily singing lessons while another 15 preschoolers received no musical training at all (Bower). At the start, middle and end of the study, the subjects were tested on five spatial reasoning tasks. After only 4 months, scores on the test to assemble a puzzle to form a picture improved dramatically for the group with the musical training, while the control group didn't, even though both groups started out with the same scores. It can be understood that this kind of improvement

¹³ Schoen, Max. *The Psychology of Music: A Survey for Teacher and Musician*. New York: The Ronald Press Company, 1940. Copyright 2001.

may not be substantial enough to alter the way people are fundamentally taught, but its results cannot be ignored. Rauscher explains, "Music instruction can improve a child's spatial intelligence for a long time, perhaps permanently".¹⁴

- Local/ International Literature

It is universally understood that people strive to learn to become wiser and more informed about the world around them. The more people learn, the more powerful they can become. It is the speed at which people learn that separates the geniuses from the average people from the learning disabled. Geniuses don't run into problems while learning, because they learn so fast. It is everyone else that could really use help. One solid way to increase the speed at which people learn is with music. People learn through music and their minds grow faster because of it. Some music, when implemented properly, can have positive effects on learning and attitude. Music is a powerful thing, and when we understand its significance, it can bring dramatic changes both positive and negative into our lives.¹⁵

Music and the arts are what make life worth living and without them, people lose hold of their culture and diversity. The ideal way to learn in the future would be to fully incorporate music into the curriculum of every school. If every

¹⁴ Bower, Bruce. "Tuning up young brains." Science News. 27 Aug. 1994
Copyright 2004.

¹⁵ Kristian David Olson. The Effects of Music on the Mind: Beyond Soothing the Savage Beast. Copyright 1996.

school supported and encouraged their students to freely pursue music with the culture of music in their everyday lives, people would become much more efficient in their learning and would become much better students on the whole. Music is a power too great for man to comprehend at this point but through further study man can learn how to better harness its power to use it to its full potential. ¹⁶

With its resulting improvements in spatial reasoning, music can also be a very helpful tool when actually implementing it into the classroom and involving it with learning basic curriculum. In New York City, a program called Learning through an Expanded Arts Program, or LEAP, has been going on for a while now in which music and the arts is implemented into the school curriculum to improve scholastic scores of children at all levels (Dean and Gross 614). One way in which music is implemented is with math. They call it "musical math," in which the teacher incorporates rhythm with counting and gaining a grasp on the fundamentals of math (618).¹⁷

¹⁶ Ibid

¹⁷ Dean, Jodi, and Ila Lane Gross. "Teaching Basic Skills Through Art and Music." Phi Delta Kappan. Apr. 1992: Copyright 2000.

Chapter 3

METHODOLOGY

This chapter presents the Research Design, the Participants of the Study, Instrumentation, Data-Gathering Procedures and the Statistical Treatment of Data.

In this study, the researcher would like to discover additional methods or programs that would help maximize the time the Youth spend inside the school setting by discovering ways to establish a conducive environment that would elicit any form of behavior leading to learning. In line with this, the researcher would like to enhance social learning behavior of the Youth, with the use of Mozart's music, to ensure proper attitude and motivation and eventually improve academic performance.

Research Design

The study will use the Descriptive - Survey Method because it deals with the current dynamics of high school students before the exposure to Mozart's music in Systems Plus College Foundation. The conditions, trends and culture of the students will be collected by the researcher in the academic and social setting. Since the study will involve observation over a period of time, specifically five (5) days before the exposure to Mozart's music and (20) twenty days while exposed to Mozart's music, the appropriate method that will be used is the longitudinal design or time series design under the Descriptive - Survey Method during the exposure to Mozart's music in both academic and social settings.

The study requires a qualitative method that observes and documents the behavior of high school students in the academic and social environment. This method also gathers information in the study of creating an environment conducive for learning, with the use of Mozart's music.

Participants of the Study

Participants of the study are high school students enrolled in Systems Plus College Foundation, Angeles City from ages 12 to 16 years old. Random Sampling is the method of choosing the participants since the researcher will observe both academic and social setting. The social setting of high school students is the common place of gathering in their recess, lunch break and free time. The participants will be in and out of these particular places. On the other hand, in their academic setting, the researcher will observe the behavior of second (2nd) year students in the classroom setting during their Personality Development period. Random Sampling is also used to determine which class will be involved in the study for a period of twenty (20) days. The class will consist of forty (40) students and is chosen randomly before the start of the study.

Instrumentation

A Research Data Form is used for documenting all data observed before and after the exposure of high school students to Mozart's music. The data consists of the current dynamics of high school students before exposure to Mozart's music and, specifically Social Learning Behavior, all details of behavior leading to learning during the exposure to Mozart's music. (See Appendix A)

A DVD Player with two (2) speakers will be used to play a CD of Mozart's music. The songs from the album of Mozart which will be used in this study are:

1. Symphony No.40 in G Minor K.550 (Molto Allegro)
2. Overture 'Le Nozze Di Figarro'
3. 12 Variations on 'Ah, Vous Dirai-je, Maman' K.265
4. Horn Concerto No.1 in D Major K.412 (Allegro)
5. Flute Concerto No.2 in D Major K.314 (Rondeu, Allegretto)
6. Litaniae De Beata Maria Virgine in B Flat Major K.109 (Sancta Maria)
7. Violin Concerto No.1 in D Major K.218
8. Piano Concerto No.21 in C Major K.467 'Elvira Madigan'
9. String Quartet in B Flat Major K.458 'Hunt' (Allegro Assai)
10. Violin Concerto No.5 in A Major K.219 'Il Turco' (Allegro Aperto)
11. Piano Concerto No.23 in A Major K.448 (Presto)

Board Games, Reading Materials and Puzzles are also used in this study during the observation while exposed to Mozart's music. The following materials were used: five (5) chess boards, five (5) Rubix Cubes, five (5) Crossword Puzzles and fifteen (15) Science Journals.

A Journal is used for the compilation of all data from day one (1) to day twenty (20). The data comes from the log book used in the actual observation during exposure to Mozart's music. Data collected from observation, before the exposure to Mozart's music, for a period of five (5) days is also compiled in this journal.

Data-Gathering Procedures

The Data-Gathering Procedure used in the study is Observation, specifically Disguised Observation. This observational technique is most appropriate for the study because in this case, the revelation of student's natural behavior while exposed to Mozart's music is vital information. This is very important data that could determine the effect of Mozart's music on the Social Learning Behavior of high school students. The researcher needs to blend in the crowd and be one with them in order to achieve this objective. On the other hand, 'emotional distance' must be present between the observer and the participants to ensure that there is no bias in gathering information and will maintain objectivity. This technique allows the researcher to better understand and interpret the observed data since the researcher is within the participants of the study.

The researcher acknowledges the current culture (behavior of students in both academic and social setting) that exists in Systems Plus College Foundation. First, the students were observed in both the academic (classroom) and social (outside the classroom) settings in order to determine the dynamics of the high school students, before the exposure to Mozart's music. The researcher used disguised observation for a period of five (5) days, one (1) hour everyday for both settings. All data is documented and stored for further reference in this study.

As we continue the research, the same two (2) settings were observed while exposed to Mozart's music, an academic setting, which will be inside the classroom during the Personality Development period, and the social setting, which will be outside the classroom, specifically the Food Court in the High

School Department during lunch break. Both settings will be observed one (1) hour a day for twenty (20) days while exposed to Mozart's music.

In the academic setting, the researcher quietly observes the students in the back row of the classroom, during the Personality Development period of a second (2nd) year class from 3:00pm to 4:00pm, pretending to read a book while carefully documenting the behavior of the students as they are exposed to Mozart's music for one (1) hour. All of the mentioned board games, reading materials and puzzles are placed on a table in front of the room.

In the social setting, the researcher quietly observes in the corner part of the Food Court, during lunch break of high school students 12:00nn to 1:00pm, pretending to read a book while carefully documenting the behavior of the students as they are exposed to Mozart's music for one (1) hour. All of the mentioned board games, reading materials and puzzles are placed in a table near the entrance of the Food Court.

Statistical Treatment of Data

All of the data gathered in the log book used for documenting during the observation are compiled into one (1) journal, the data is then arranged chronologically. The recorded data of the behavior of students are then analyzed if there is a significant change in behavior as the students are exposed to Mozart's music. Significant effects are represented by the changing frequency of any behavior that leads to learning while exposed to Mozart's music in comparison with the existing dynamics of the students before the exposure to Mozart's music.

Chapter 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the analysis and interpretation of findings in relation to the research objectives and hypothesis. The data and information gathered were organized for a better understanding of the events in a day to day basis.

The dynamics of high school students, before exposure to Mozart's music, in the academic and social setting during the observation for a period of five (5) days is interesting. In the academic setting (classroom), students are observed to be quiet and reserved. Students just tend to do their own thing silently in their places. A very low percentage of students, ten (10) percent, elicit behavior leading to social interaction and a zero (0) percent of the class elicit behavior leading to learning. Most of the students just sit down resting and sleeping for one (1) hour. No significant activity is taking place and the students are just waiting for the next teacher to come for the next subject. No interaction with the observer is present.

Behavior of students in the academic setting:

1. Sleeping
2. Resting
3. Minimal verbal communication
4. Looking outside the window
5. Daydreaming
6. Playing with fingers
7. Picking on nose
8. Brushing hair/ grooming
9. Looking at face with small mirrors

In the social setting (food court), students display high percentages of social interaction. They eat, talk and group together for one (1) hour. An average of sixty (60) to seventy (70) percent of the students elicit behavior leading to social interaction. Almost everyone is communicating to one another but still no communication with the observer. On the other hand, there is no evidence of student behavior that lead to learning during this time period.

Behavior of students in the social setting:

1. Eating/ Drinking
2. Buying food and drinks
3. Playing with friends
4. Verbal communication
5. Laughing/ Shouting
6. Singing/ Chanting
7. Grouped together
8. Running/ Chasing each other
9. Using cellular phones, gadgets, MP3, PSP etc.

All of the observation procedures were done consistently by the same observer, on the same time tables, and on the same locations. Participants of the study are not in any way informed about the research study and its objectives. The observation was done as confidential as possible to ensure the natural behavior of the participants in the respective settings during the observation period. The data collected by the observer in both academic and social settings are also confidential.

After a five (5) day observation period and successfully documenting the current dynamics of high students in the academic and social settings before the exposure to Mozart's music, the researcher continues with a twenty (20) day observation period of the same participants in their respective environments while exposed to Mozart's music.

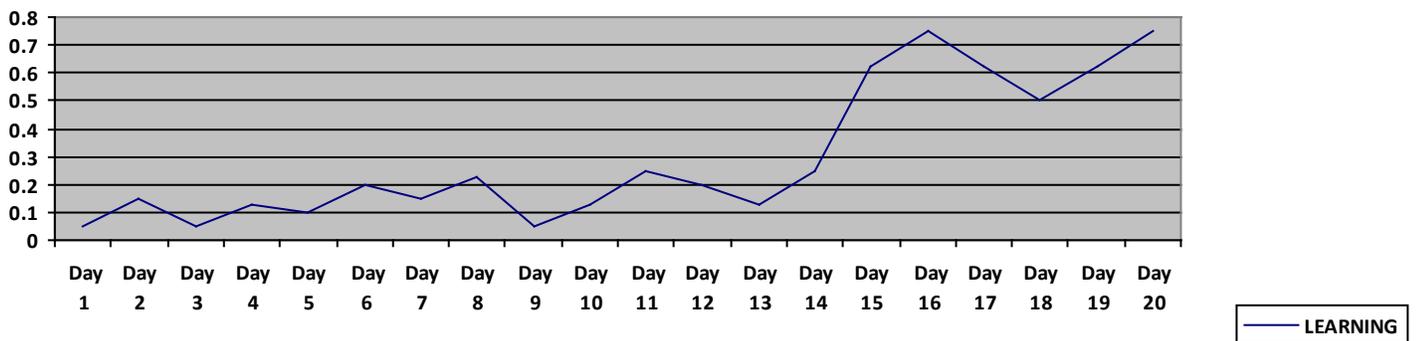
This is the organized weekly table of data showing the percentage of students, out of their respective student population, that showed behavior leading to learning or social interaction while listening to Mozart's music in both Academic Setting (Classroom) and Social Setting (Food Court).

Day	Classroom	Food Court
1 Mon Jan 11, 2010	2 of 40 = learning 5 of 40 = social interaction	0 of 150 = learning 75 of 150 = social interaction
2 Tue Jan 12, 2010	6 of 40 = learning 5 of 40 = social interaction	0 of 135 = learning 90 of 135 = social interaction
3 Wed Jan 13, 2010	2 of 40 = learning 10 of 40 = social interaction	0 of 140 = learning 60 of 140 = social interaction
4 Thu Jan 14, 2010	5 of 40 = learning 5 of 40 = social interaction	12 of 130 = learning 90 of 130 = social interaction
5 Fri Jan 15, 2010	4 of 40 = learning 10 of 40 = social interaction	10 of 120 = learning 80 of 120 = social interaction

Day	Classroom	Food Court
6 Mon Jan 18, 2010	8 of 40 = learning 15 of 40 = social interaction	0 of 110 = learning 70 of 110 = social interaction
7 Tue Jan 19, 2010	6 of 40 = learning 20 of 40 = social interaction	10 of 140 = learning 90 of 140 = social interaction
8 Wed Jan 20, 2010	9 of 40 = learning 10 of 40 = social interaction	0 of 110 = learning 80 of 110 = social interaction
9 Thu Jan 21, 2010	2 of 40 = learning 8 of 40 = social interaction	4 of 130 = learning 70 of 130 = social interaction
10 Fri Jan 22, 2010	5 of 40 = learning 15 of 40 = social interaction	0 of 120 = learning 90 of 120 = social interaction

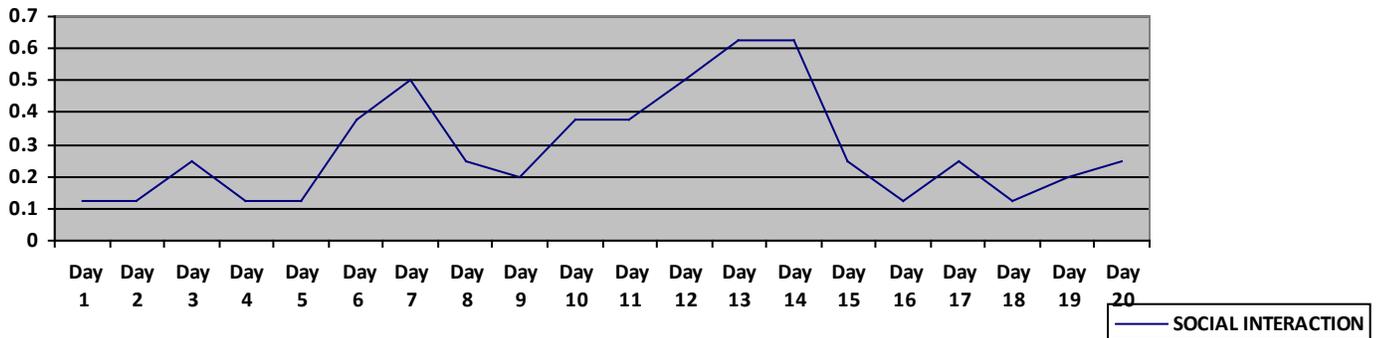
Day	Classroom	Food Court
11 Mon Jan 25, 2010	10 of 40 = learning 15 of 40 = social interaction	15 of 140 = learning 70 of 140 = social interaction
12 Tue Jan 26, 2010	8 of 40 = learning 20 of 40 = social interaction	0 of 130 = learning 90 of 130 = social interaction
13 Wed Jan 27, 2010	5 of 40 = learning 25 of 40 = social interaction	0 of 100 = learning 60 of 100 = social interaction
14 Thu Jan 28, 2010	10 of 40 = learning 25 of 40 = social interaction	0 of 120 = learning 80 of 120 = social interaction
15 Fri Jan 29, 2010	25 of 40 = learning 10 of 40 = social interaction	0 of 110 = learning 90 of 110 = social interaction

Day	Classroom	Food Court
16 Mon Feb 1, 2010	30 of 40 = learning 5 of 40 = social interaction	10 of 120 = learning 90 of 120 = social interaction
17 Tue Feb 2, 2010	25 of 40 = learning 10 of 40 = social interaction	8 of 130 = learning 70 of 130 = social interaction
18 Wed Feb 3, 2010	20 of 40 = learning 5 of 40 = social interaction	10 of 110 = learning 60 of 110 = social interaction
19 Thu Feb 4, 2010	25 of 40 = learning 8 of 40 = social interaction	0 of 100 = learning 90 of 100 = social interaction
20 Fri Feb 5, 2010	30 of 40 = learning 10 of 40 = social interaction	0 of 120 = learning 90 of 120 = social interaction



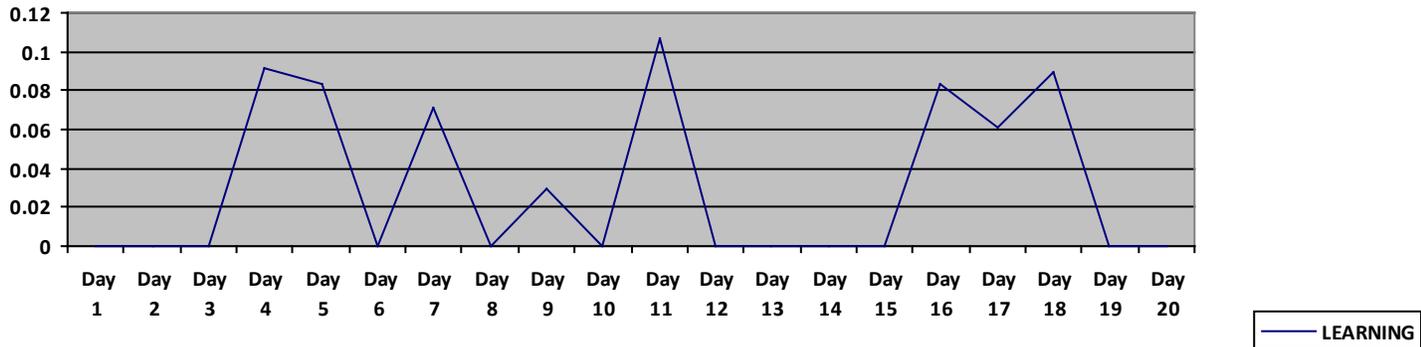
**Graph 1. Academic Setting (Classroom)
 Percentage of students that showed behavior
 leading to learning**

Graph 1 shows the daily percentage of students that showed behavior leading to learning. The highest percentage of students is on day 16 with a value of seventy-five (75) percent and the lowest percentage is on days 1,3 and 9 with a value of five (5) percent. Graph 1 also shows a significant increase in value from day 14 to day 20.



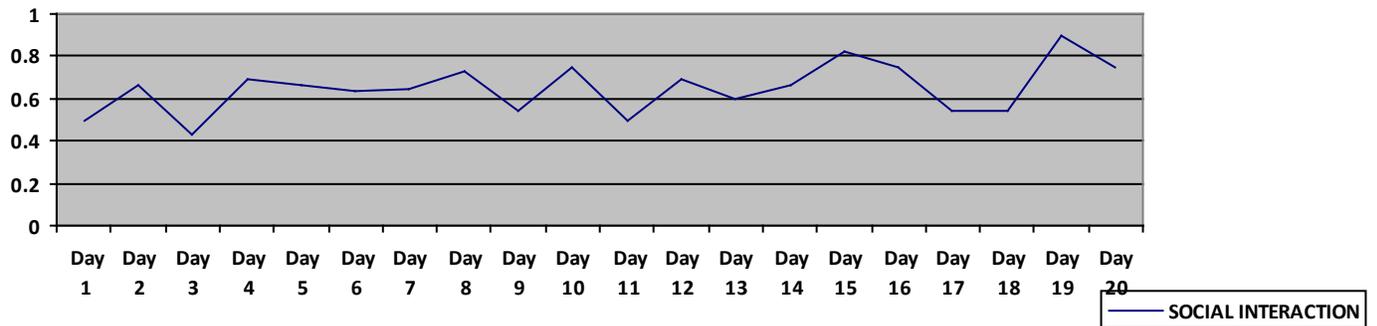
**Graph 2. Academic Setting (Classroom)
 Percentage of students that showed behavior
 leading to social interaction**

Graph 2 shows the daily percentage of students that showed behavior leading to social interaction. The highest percentage of students is on days 13 and 14 with a value of sixty-two (62) percent and the lowest percentage is on days 1,2,4,5,16 and 18 with a value of twelve (12) percent. Graph 2 shows a significant increase in value from day 11 to day 14 and then a significant decrease in value from day 15 to 20.



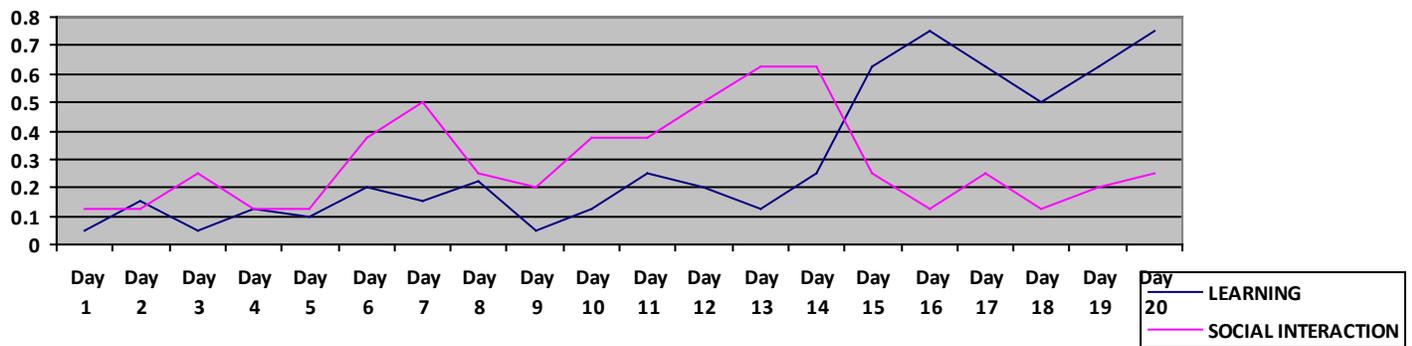
**Graph 3. Social Setting (Food Court)
Percentage of students that showed behavior
leading to learning**

Graph 3 shows the daily percentage of students that showed behavior leading to learning. The highest percentage of students is on day 11 with a value of ten (10) percent and the lowest percentage is on days 1,2,3,6,8,10,12,13,14,15,19 and 20 with a value of zero (0) percent. Graph 3 shows an irregular increase and decrease in value from day 1 to day 20.



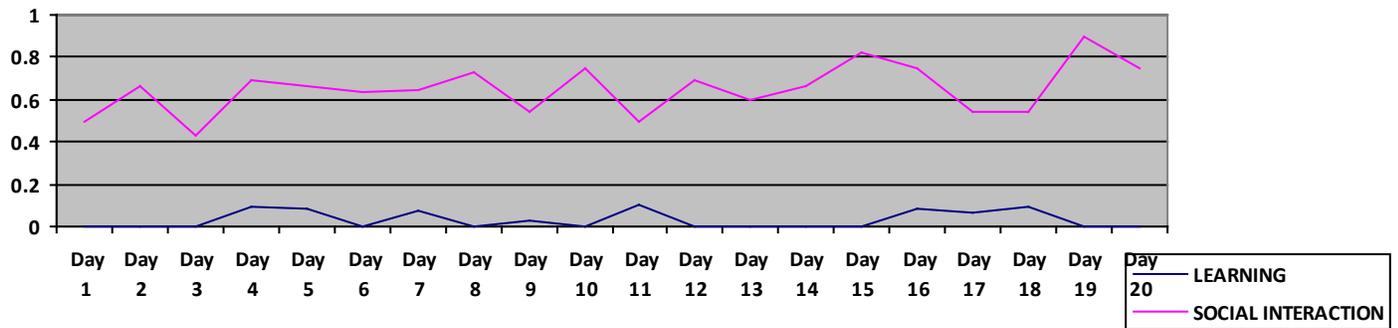
Graph 4. Social Setting (Food Court)
Percentage of students that showed behavior
leading to social interaction

Graph 4 shows the daily percentage of students that showed behavior leading to social interaction. The highest percentage of students is on day 19 with a value of ninety (90) percent and the lowest percentage is on day 3 with a value of forty-two (42) percent. Graph 4 shows no significant increase or decrease in value from day 1 to day 20.



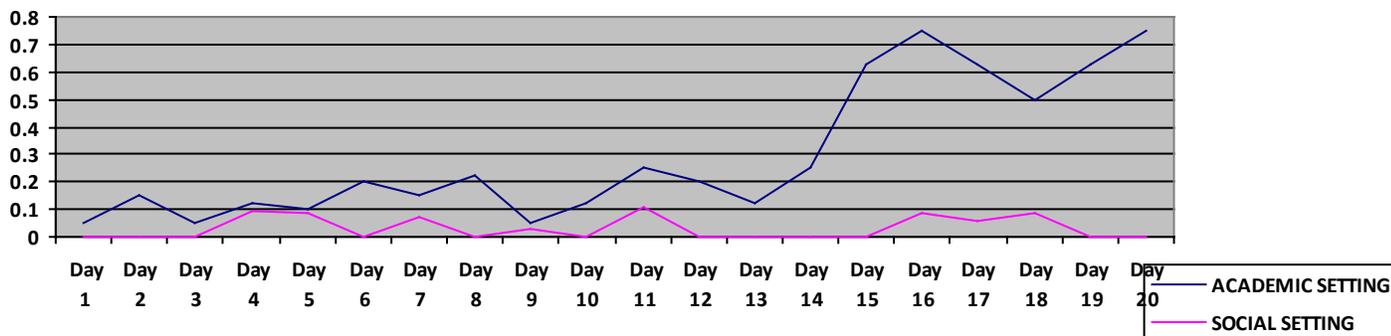
**Graph 5. Academic Setting (Classroom)
 Percentage of students that showed behavior
 leading to learning and social interaction**

Graph 5 compares the percentages of students that showed behavior leading to learning and social interaction inside the classroom. The value of learning shows an increase towards the end of the graph and the value of social interaction shows an increase in the middle of the graph but then decreases towards the end.



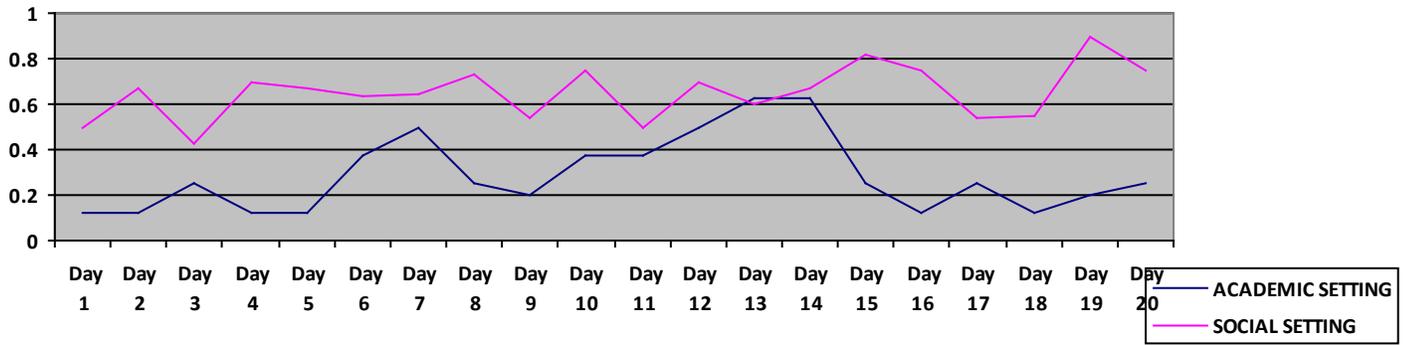
Graph 6. Social Setting (Food Court)
Percentage of students that showed behavior
leading to learning and social interaction

Graph 6 compares the percentages of students that showed behavior leading to learning and social interaction in the Food Court. Both learning and social interaction values have no significant increase or decrease.



**Graph 7. Academic Setting (Classroom)
and Social Setting (Food Court)
Percentage of students that showed behavior
leading to learning**

Graph 7 compares the percentage of students in the classroom and the percentage of students in the food court that showed behavior leading to learning while exposed to Mozart's music. The value of the academic setting (classroom) significantly increased compared to the value of the social setting (food court).



**Graph 8. Academic Setting (Classroom)
and Social Setting (Food Court)
Percentage of students that showed behavior
leading to social interaction**

Graph 8 compares the percentage of students in the classroom and the percentage of students in the food court that showed behavior leading to social interaction while exposed to Mozart's music. The value of the academic setting (classroom) and the value of the social setting (food court) have no significant changes.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

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APPENDIX A

SYSTEMS PLUS COLLEGE FOUNDATION
OFFICE OF THE HIGH SCHOOL COUNSELOR
STUDENT CUMULATIVE DATA FORM
SCHOOL YEAR 20____-20____

STUDENT NUMBER _____ YEAR/SECTION _____

FAMILY NAME FIRST NAME MIDDLE NAME
AGE SEX RELIGION NATIONALITY
HOME ADDRESS TEL.NO. _____
DATE OF BIRTH PLACE OF BIRTH _____
FATHER'S NAME OCCUPATION _____
MOTHER'S NAME OCCUPATION _____
NO. OF SIBLINGS YOUR POSITION: (EX *YOUNGEST, ELDEST OR MIDDLE*) _____
SPECIAL SKILLS: _____
SPORTS: HOBBIES: _____
FAVORITE SUBJECT/S: FAVORITE TEACHER: _____
FAVORITE MUSIC/SINGER/BAND: _____
COUNTRY/PLACE YOU WANT TO VISIT: _____

FAVORITE PET/ANIMAL: _____ FAVORITE BOOK/S: _____
 FAVORITE MOVIE: _____ FAVORITE FOOD: _____
 FAVORITE COLOR: _____ FAVORITE PASTIME: _____
 HAVE YOU EVER BEEN HOSPITALIZED? YES ___ NO ___ ILLNESS: _____
 HEIGHT: _____ WEIGHT: _____ EYES: _____ HAIR COLOR: _____
 MOTTO IN LIFE: _____
 DURING NURSERY, WHERE DID YOU STUDY? _____
 AWARDS/CERTIFICATES/HONORS RECEIVED _____
 DURING ELEMENTARY, WHERE DID YOU STUDY? _____
 AWARDS/CERTIFICATES/HONORS RECEIVED _____
 SCHOOL LAST ATTENDED _____ SY _____
 HAVE YOU EVER BEEN SUSPENDED IN SCHOOL? YES ___ NO ___ SCHOOL YEAR _____
 NATURE OF OFFENSE _____ HOW MANY DAYS? _____
 HAVE YOU EVER HAD BAD DREAMS/NIGHTMARES? YES ___ NO ___ WHAT AGE _____
 HOW OFTEN? ONCE ___ TWICE ___ THRICE ___ MANY ___ ALWAYS ___ SELDOM ___
 DO YOU HAVE SLEEPING PROBLEMS? YES ___ NO ___ EXPLAIN _____
 DO YOU FIGHT WITH YOUR BROTHERS/SISTERS? YES ___ NO ___
 HOW OFTEN? NEVER ___ SELDOM ___ ONCE A MONTH ___ ALWAYS ___
 DO YOU HAVE PROBLEMS WITH YOUR FAMILY? YES ___ NO ___
 EXPLAIN _____
 WHAT IS YOUR GREATEST ASPIRATION? _____
 WHAT DO YOU WANT TO BE WHEN YOU GROW UP? _____
 WHAT COURSE DO YOU WANT TO TAKE UP IN COLLEGE? _____
 WHAT JOB DO YOU WANT FOR THE REST OF YOUR LIFE? _____
 DO YOU WANT TO HAVE A FAMILY? YES ___ NO ___ WHY? _____
 ARE YOU HAPPY? YES ___ NO ___ WHY? _____
 DESCRIBE YOURSELF IN YOUR OWN WORDS:

For Guidance Office Files Only
Jose Maria G. Pelayo III
HS Counselor

APPENDIX B

**SYSTEMS PLUS COLLEGE FOUNDATION
 OFFICE OF THE HIGH SCHOOL COUNSELOR
 STUDENT ACHIEVEMENT DATA FORM
 SCHOOL YEAR 20____-20____**

STUDENT NUMBER _____ YEAR/SECTION _____

 FAMILY NAME FIRST NAME MIDDLE NAME
 AGE ___ SEX ___ RELIGION _____ NATIONALITY _____
 COMPLETE ADDRESS _____
 TEL.NO. _____ CELL NO: _____ PARENTS CONTACT NO _____
 DATE OF BIRTH _____ PLACE OF BIRTH _____
 FATHER'S NAME _____ OCCUPATION _____
 MOTHER'S NAME _____ OCCUPATION _____
 PRE-ELEMENTARY _____ AWARDS _____
 ELEMENTARY _____ AWARDS _____
 LAST GRADE AVERAGE _____ (BEFORE ENROLLING IN SPCF)
 MEDALS/AWARDS/CERTIFICATES RECEIVED _____

HAVE YOU JOINED THE FOLLOWING CONTESTS/ORGANIZATIONS: (PLEASE CHECK)

ACADEMIC QUIZ VARSITY (SPORTS) DRAMA CLUB BSP
 SINGING CONTEST PERFORMING ARTS YOUTH MINISTRY GSP
 DANCE CONTEST MUSIC/CHOIR SPORTS CLUB SBO
 ACAA MEET RONDALLA/BAND MATH/SCIENCE

OTHER ORGANIZATIONS/TEAMS/CONTESTS: _____

AWARDS/PRIZES/MEDALS/CERTIFICATES RECEIVED: _____

ACADEMIC PERFORMANCE	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL	REMARKS
1 ST YEAR												
2 ND YEAR												
3 RD YEAR												
4 TH YEAR												
ABSENCES	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL	REMARKS
1 ST YEAR												
2 ND YEAR												
3 RD YEAR												
4 TH YEAR												
BEHAVIOR EVALUATION	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	TOTAL	REMARKS
1 ST YEAR												
2 ND YEAR												
3 RD YEAR												
4 TH YEAR												

USE THE BACK OF THIS FORM FOR OTHER TYPES OF EVALUATION, INTERPRETATION, ANALYSIS AND CONCLUSION.

For Guidance Office Files Only
 Jose Maria G. Pelayo III
 HS Counselor

NOTED BY:
 Mr. Carlito S. Antonio
 HS Principal