

A COMPARATIVE - CORRELATIONAL STUDY OF EMOTIONAL INTELLIGENCE AND MUSICAL INTELLIGENCE AMONG STUDENTS FROM YEARS EIGHT TO ELEVEN AT MODERN INTERNATIONAL SCHOOL BANGKOK, THAILAND

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Abstract: In this study, emotional intelligence and musical intelligence were investigated and analyzed among the students from year's eight to eleven in MISB. One hundred and eighty three students participated in this study in the first semester of the 2014-2015 academic year. The quantitative data collected by means of the EMI questionnaire, the findings indicated that the participants had average levels of both emotional intelligence and musical intelligence and there were no significant differences in the emotional intelligence of the participants according to year levels and gender. There was no significant difference in the musical intelligence of the participants according to year levels. However, a significant difference was found in the musical intelligence of the participants according to gender. Furthermore, a positive relationship was found between emotional intelligence and musical intelligence. In addition to the results of this study, recommendations for practice and future research are also provided.

Keywords: Emotional Intelligence, Musical Intelligence, Multiple Intelligences.

Introduction

In the past, most school curriculum around the globe were developed in a fashion where teachers solely by focusing on the academic performance of students. Then IQ was considered as the most important factor for a student's academic success. However, with the arrival of Gardner's Multiple Intelligences theory (1983) and other perspectives on learning, it was concluded that the development of emotional intelligence is as important as the consideration of IQ for academic performance (Mayer & Salovey, 1997).

Furthermore, other than incorporating subjects to test IQ, many international schools in Thailand incorporate subjects such as music, drama, physical education, arts and many more within the school's daily timetable to enhance learning in many domains. For example, in the Sikh international schools of Bangkok it is part of the school curriculum for Sikh students to strictly participate in Hindustani classical music

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classes. Given the researcher's strong interest in music, she conducted an exploratory study to investigate the relationship between emotional intelligence and musical intelligence among years 8 to 11 students in Modern International School Bangkok. However, no previous research for this particular group of students had been conducted. Therefore, this study had a main focus on a relationship of those intelligences.

Objectives

This study sought to address seven research objectives as follows.

1. To identify the emotional intelligence level of the students from years 8-11 in MISB.
2. To identify the musical intelligence level of the students from years 8-11 in MISB.
3. To investigate if there is a significant difference in the emotional intelligence between students of years 8-11 in MISB.
4. To investigate if there is a significant difference in the musical intelligence between students of years 8-11 in MISB.
5. To investigate if there is a significant difference in the emotional intelligence between males and females from years 8-11 in MISB.
6. To investigate if there is a significant difference in the musical intelligence between males and females from years 8-11 in MISB.
7. To determine if there is a significant relationship between the emotional intelligence and musical intelligence of the students in MISB.

Literature Review

There are two main theories supporting the research: emotional intelligence and musical intelligence.

Emotional Intelligence

Emotional Intelligence theory developed by Salovey and Mayer (1990), explains the importance of the control and evaluation of emotions in order to perceive how one thinks and how it relates to the decisions made in order to reach the desired outcomes. Goleman (1995, 1998) later popularized this concept through his book where he explained the importance of emotional intelligence in human personal and social development. He also emphasized the importance of EQ being higher than IQ. Furthermore Bar-On (1997, 2000) created the Mixed Model of Emotional Intelligence. He described emotional intelligence as a type of intelligence concerning the understanding and comprehension of oneself and others by relating to those in the environment and also adapting to the surroundings so as to deal successfully with the environmental conditions. Bar-On's (1997) Mixed Model of Emotional Intelligence was used as the model to analyze emotional intelligence. He described his model through five main components of emotional intelligence as follows:

- *intrapersonal emotional intelligence* includes self-awareness, assertiveness, self-regard, self-actualization and independence components of emotional intelligence;
- *interpersonal emotional intelligence* includes empathy, interpersonal relationship and social responsibility components of emotional intelligence;

- *adaptability emotional intelligence* includes problem solving, reality testing and flexibility components of emotional intelligence;
- *stress management emotional Intelligence* includes stress tolerance and impulse control components of emotional intelligence;
- *general mood emotional intelligence* includes happiness and optimism components of emotional intelligence.

These theories played a very important part in this study as it helped deepen the understanding of emotional intelligence which in turn helped in answering some of the research questions of this study. Previous studies conducted related to Emotional Intelligence were also analyzed to further apprehend this theory.

Multiple Intelligences Theory: Musical Intelligence

Multiple Intelligence theory originated by Howard Gardner (1983) indicated that intelligence is not a single general ability and can be differentiated based on the nature and nurture of learners. Musical Intelligence is one of the intelligences explained in the classification of this theory. Musical Intelligence involves the ability to understand and appreciate musical rhythms and patterns (Gardner, 2000). The understanding of this theory helped identify the Musical Intelligence of the sample of this study. Furthermore it also helped in answering the research questions by identifying possible correlations with Emotional Intelligence. Previous studies conducted with regards to Musical Intelligence were also used as an aid to deepen the understanding of this theory.

Conceptual Framework

The conceptual framework for this study is shown in Figure 1. It shows the four main variables Emotional intelligence and Musical intelligence based on the theories along with Year and Gender with their corresponding relationships.

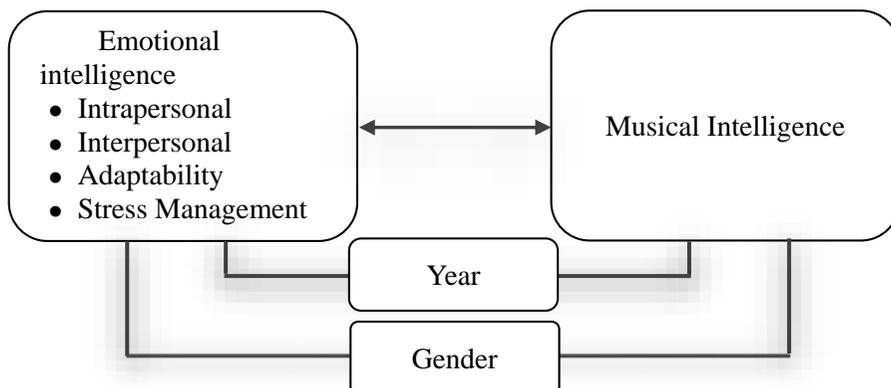


Figure 1: The Conceptual Framework Used for The Study

Procedures

Participants

The population of this study was all 183 students in years eight to year eleven in MISB. The researcher chose all of those students from years eight to year eleven in MISB during the 2014 school academic year. The total sample size for this study, therefore, was 183 students.

Instrumentation

This was a quantitative research study, which utilized both descriptive and inferential statistics. Gardner's Multiple Intelligences (1983) test was used. However only questions relating to musical intelligence were used as they were relevant to this study. Furthermore the Bar-On Emotional Intelligence test created by Bar-On (1997) himself was also used to analyze the Emotional intelligence level of the selected sample. These two questionnaires were put together in one form called the Emotional and Musical Intelligence (EMI) Questionnaire. The questionnaire consisted of three parts: a demographic section and an item list which was a combination of items relating to emotional intelligence and musical intelligence. The reason the items from emotional intelligence and musical intelligence were mixed was so that the respondents did not intentionally predict their total scores. In addition to the mixing of items, some of the items relating to emotional intelligence were phrased negatively for better accuracy of the results. These latter items were reverse coded during data entry prior to the data analysis.

There were four parts to the EMI questionnaire. They were the cover letter, demographic section, musical intelligence test, and the Emotional Quotient (EQ) through the Bar-On (1997) test. The questionnaire was administered and analyzed by the researcher. There have been a few reliability and validity tests conducted for Bar-On's Emotional Quotient test (Dawda & Hart, 1999). Their study concluded satisfactory concurrent and discriminant validity for Bar-On's Intelligence test. Internal consistency was assessed using Cronbach's alpha which resulted in an alpha of .89. The Cronbach's alpha for the current study was .83. A pilot study was conducted for a group of 30 students from MISB for the reliability of the musical intelligence test which resulted in .82 for the Cronbach's alpha. The main study was conducted for a sample size of 183 students from MISB and the Cronbach's alpha for the main study was .51. The interpretation for the results for all the components of emotional intelligence can be seen in Table 1. Taking the difference between the highest possible score and the lowest possible score, and then dividing the difference by five to create equal divisions for each level calculated the interpretation scores in Table 1.

The interpretation for the results for musical intelligence can be seen in Table 2. The interpretation scores in Table 2 were calculated by multiplying the values of the likert scale with the total number of items for musical intelligence. After taking the difference between the highest possible score and the lowest possible score, the researcher divided the difference by five and created equal divisions for the difference calculated before.

(See Table 1 and 2 on the next page)

Table 1: Table of Interpretation of the Scores for Emotional Intelligence and its Components

	Very Low	Low	Average	High	Very High
Intrapersonal	1-1.8	1.81-2.6	2.61-3.4	3.41-4.2	4.21-5
Interpersonal	1-1.8	1.81-2.6	2.61-3.4	3.41-4.2	4.21-5
Adaptability	1-1.8	1.81-2.6	2.61-3.4	3.41-4.2	4.21-5
Stress Managemen	1-1.8	1.81-2.6	2.61-3.4	3.41-4.2	4.21-5
General Mood	1-1.8	1.81-2.6	2.61-3.4	3.41-4.2	4.21-5
Total EQ	1-1.8	1.81-2.6	2.61-3.4	3.41-4.2	4.21-5

Table 2: Table of Interpretation of the Scores for Musical Intelligence

	Very Low	Low	Average	High	Very High
Musical Intelligence	1-1.8	1.81-2.6	2.61-3.4	3.41-4.2	4.21-5

Findings

The main findings of this study were as follows:

- The respondents as a whole had an average level of emotional intelligence as can be seen in Table 3.

Table 3: Mean Scores and Standard Deviation for Emotional Quotient (N=183)

Component	M	S.D.	Interpretation
Intrapersonal	3.0	.404	Average
Interpersonal	2.6	.346	Average
Adaptability	2.8	.407	Average
Stress	2.9	.554	Average
General Mood	2.7	.321	Average
Total EQ	2.8	.273	Average

- No significant difference was found in the emotional intelligence of the respondents according to year levels and gender. The One-way ANOVA was used to analyze the result for research objective 3. From the One-way ANOVA it was seen that the significance of .760 was more than .05. Therefore, the research hypothesis was rejected which implied that there is no significant difference in the emotional intelligence between students of years 8-11 at MISB. Regarding gender, the independent sample t-test was used to analyze research objective 5 and the result implied that the research hypothesis was rejected and that there was no significant difference found in the emotional intelligence levels between males and females from years 8-11 at MISB.
- The respondents had an average level of musical intelligence and this can be seen in Table 4.

Table 4: Mean Score and Standard Deviation for Musical Intelligence (N=183)

Variable	M	S.D.	Interpretation
Musical Intelligence	2.82	.444	Average

- No significant difference was found in the musical intelligence of the respondents according to year levels. The One-way ANOVA was used to analyze research objective 4 and the results indicated the rejection of the research hypothesis.
- There was a significant difference found in the musical intelligence of the respondents according to gender. The independent samples t-test was used to analyze research objective 6 and the research hypothesis was accepted. When compared, males had higher musical intelligence levels than females.
- A moderately positive relationship was found between the emotional intelligence and musical intelligence of the respondents. Research objective 7 was analyzed using the Pearson Product Moment Correlation Coefficient (r). From the results of this test, it was seen that the correlation (r) was .348 which determined that the two variables emotional intelligence and musical intelligence shared a moderately positive relationship.

Discussion

Emotional Intelligence

Adapting from Mayer and Salovey's (1997) theory of emotional intelligence and focusing on Bar-On's (1997) Mixed Model of emotional intelligence, it can be seen from the main findings of this research that emotional intelligence of the respondents was of an average level. Taking each component of the Mixed Model individually, it can be seen from Table 3 that all the major components including intrapersonal, interpersonal, adaptability, stress and general mood of the respondents were of average levels as well. This study focused on Sikh schools only and this may have made the point of Cherniss, Extein, Goleman and Weissberg (2006) valid that making generalizations across studies was difficult.

The respondents scored an average level for the intrapersonal component of EQ and the interpersonal component. This may be because of the difference in western and Asian culture. The intrapersonal component is related to understanding oneself and interpersonal is about understanding other people (Bar-On, 1997). The respondents' ages were between 12-15 and at that age the students go through phases where they are not fully capable of understanding themselves and their goals. In co-educational international schools, students make friends with both genders and gradually with time are able to understand the needs of other people. Furthermore, as a result of the influence of the Thai culture, respondents do not have high independence as the culture does teach people to be emotionally dependent on others. However, since this study solely focused on the Sikh culture, there may have been affects from the Sikh culture on the results above as Sikhs are taught to be independent (Sangat, 2010). Yet, the same time, the lifestyle and beliefs of Sikhs

nowadays are evolving according to requirements of the social and cultural environment.

The respondents scored an average level in the adaptability, stress management and general mood components of EQ. The results may not be high due to the age group of the respondents and at those ages and according to the curricula of the school, the students are close to the final board exams in which their aim is to do well as their future life outside school depends on it especially for the respondents from Year 11. That can be stressful for some and those emotions could be the result of average scores for stress management. Furthermore, the adaptability and general mood may also be of average due to the mixed emotions respondents have at that age as they have reached phases in life where they have to work towards their future careers.

The overall results also showed that there was no significant difference in the EQ of the respondents according to year levels and gender. A significant difference was expected, as the goals and nature of respondents from Year 11 should be a little different from the respondents of Year 8. Females were also expected to have higher EQ than males (Goleman, 1998). This can be because of the influence of the Sikh culture as Sikhs are taught to treat males and females equally (Sangat, 2010).

Musical Intelligence

As mentioned in above, this variable was extracted from Gardner's (1983) theory of Multiple Intelligences. It is the feeling one obtains through pitches, rhythms and tempos in addition to how one is emotionally affected by these components. From the main findings, it can be concluded from Table 4 that the respondents have an average level of musical intelligence. Furthermore, there was no significant difference found in the musical intelligence of the respondents among year levels. However, there was a significant difference found between genders. It was also discovered that males have a higher musical intelligence than females. The mean scores of musical intelligence were expected to be higher as the research was conducted in a Sikh school where music is very important in the teachings of the religion (Sangat, 2010). However, the results could have been lower than expected because the researcher surveyed all the students from years 8-11 irrespective of their musical backgrounds or interest in music. The scores would have been higher if the sample consisted of students related to musical performance only. Furthermore, possible reasons of males having a higher musical intelligence than females could be because of the influence of the Sikh culture. In the Sikh culture, even though there is equality for learning and performing raags of the Hindustani Classical music among genders (Sangat, 2010), the adult males show more interest than females in some areas and that could have influenced the Sikh students of the school. Females have musical intelligence but in the age groups belonging to years 8-11 they may concentrate more on their academic performance so as to excel in the IGCSE examinations.

This study is with agreement with Bhattacharya's (2014) study on the effects of emotional intelligence on musical performance as this study also showed similar positive results on studies conducted between emotional intelligence and musical performance; similar results were achieved from this study as a moderately positive relationship was found between emotional intelligence and musical intelligence.

Recommendations

Recommendations for Future Practice

Considering that respondents had average level of EQ and musical intelligence, it might help effective learning if instructors incorporate additional activities within the curricula to boost emotional intelligence and musical intelligence in order to improve the academic performance of the students. The researcher also recommends the instructors of Sikh schools and other international schools to incorporate ideas in different subjects of involving students to use their imagination, emotions and social sensibilities for effective learning rather than just focusing on high academic performances.

Emotional intelligence does affect musical performance (Weinberger, 2000; Rauscher, 2002) and academic performance as well (Gur, 2002; Aldalalah & Fong, 2010; Christopher & Memmott, 2006; Jayanama, 2000). Therefore, involving activities for including the important facets of EQ and musical intelligence can improve the academic performance and can also improve the morale and confidence of the students. The instructors should help students discover their talents and help them grow. More activities can be incorporated into the school's curriculum which can increase the awareness of the student's talents within themselves, appreciate the students for their unique talents regardless of their position compared to the other students. This should also blend with the latest learning technologies available for instructors through educational websites and applications.

Musical intelligence can be improved by motivating students, both males and females to take part in musical activities and classes. Music can also act as a stress buster. Through the main findings of this study, it is known that there is a positive relationship between musical and emotional intelligence. Therefore improving the musical intelligence can improve the emotional intelligence of students or vice versa. This in turn can directly affect how students handle themselves, their relationships and their performances academically or non-academically.

Recommendations for Future Research

This study can be replicated with a larger sample at all other international schools in Thailand or in other countries as well. This study can also be replicated with a sample taken from different age groups. Furthermore, this study can also be replicated to institutions from other religions as well.

The researcher also recommends that further research use qualitative methods for the research approach in addition to quantitative methods in order to assist in developing a more in-depth analysis leading to a richer understanding of these concepts. Moreover, the researcher recommends future researchers to cross-examine the items in the EMI questionnaire related to EQ and modify the items in order to make it more suitable for Asian cultures. Regarding the items on the EMI questionnaire related to musical intelligence, the researcher recommends future researchers to create additional items for musical intelligence in order to understand the depth of this variable more accurately.

Finally, the researcher hopes that this study will help more effective teaching for music classes and also on an overall basis where the individual differences of the

students are taken into consideration and appreciated. Students should be encouraged to accept their unique talents and realize their potentials. All these extra efforts will be valuable and will contribute to a better future in the field of education.

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