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Positive correlation between music and science

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Abstract

Aim of the study was to find out positive relation between music and science. It was hypothesised that music and science will be positively correlated.

Introduction: Music layout the musical score of our lives which can be invoke passion and motivate any one to dance, move or sing. Music is also established in science where sound is manufactured with some vibrations and those vibrations are herd in ears as sound waves. The difference in pitch, tempo, volume and rhythm are mathematical. The science of sound reminds us to listen and feel the vibrations. Music and science are two sides of a coin. It is an art as well as science. Music as art is innovative thought process and artistry to achieve the desired aim. On the other hand science implement interaction and investigation to create latest scientific findings. Music couple these two different establishment in a very close associative alliance. This paper tells the analytical and critical study of musical and scientific collaboration to sum up music as art and science. The defence is prepared on qualitative assessment of information drawn from related sources and literature. The ultimate **Conclusion** tells that music students who were playing music or engaged in musical activities secured better grades in science and music maintains a great harmony with science.

Keywords: Music, pitch science, vibration rhythm

Introductions

The correlation between music and science is very ancient. The oldest discovered musical instrument found is flute, made of hollow bear bone (45,000 years old) which was found in Slovenia in 1995. The complete instrument which can be played i.e. small flute made of hollow bird bone about 9000 year old was found in China in the year 1999.

Music as Science and Art

Music is an art and science as well. Music and science are very closely related. Both are logical and based on mathematical principles. These are amalgamated with innovative thinking and artistry to reach at conclusions that are illuminative and inspiring. Science can be expressed as the Music of intellect and Music as the Science of Heart. Music is Mathematics, its composition is actually a mathematical exercise. A galaxy of musical expressions and emotions as well as basic source of rhythms, tempos and sounds can be created. It is the interplay of tempo, sounds and pitch that produce music. It is just like the interaction of well-known knowledge and facts mixed with fascination, belief and innovation creates latest scientific findings. Both Music and Science use a certain technique and hypothesis to come out with concrete solution and answer the untouchable enigma of life.

There are numerous theories base on scientific principles which endeavour to describe melody. All the above explanation is enough to indicate that music is a very diverse and complex in nature as any scientific theory or principle. Some has hypothesised that music is the father of mathematics. Science educate us regarding sound is vibration and variety of sounds are made by frequency of vibration. It can said that Music is the study of sound formed by the vibrations which are then put into variety of patterns which in turn bring out emotions. Music has its basis on maths and the mathematicians see mathematics as music of the intellect.

Human Civilization and Music

Music played a vital role in civilizing the human race. Music is not just a melodious set of noises but it is a bridge between languages and cultural heritage. Music is path of discovering harmony not only within community but serves as a bridge to join with other communities and societies. Music is the common human common divisor. All cultures have it and share it with each other.

There are so many scientific speculations in regard to music and its evolution but there is a gap of scientific explanation of music. Music is a feeling of emotion with unexplained abstract that is distinctively human is. It is a power that can connect people even separated by different miles, cast, cred, culture or diversification. Science has power to unfold many unseen but it, alone cannot originate them. Science has the ability to describe music but intelligence and passion can create it.

Music and Scientific Patterns

Music and science correlation is natural. Scientists are very good in studying patterns and very comfortable with mathematics and music is systematic and scientific patterns and simple maths. It is very important to understand science and not just music. Many says that music needs imagination, emotions and will to create it and implementation of the music theory requires practice, impulse and felicity. This is also true in science that an initial stroke of innovation is required to get going. The hardest part sometimes can be the initial spark and then music can flow very freely. The musical calculations and data collection are followed after that initial start.

Beauty of Music and Science

Possibly the closest similarity is between the musician and scientist. There is a very unique and strange contradiction in both. The nucleus of work i.e. the preparation, the execution, the trials, the weeks and months of computation and reviewing is very personal and private. In the collaborative research work or playing music in bands the preparation are isolating and personal. The best part is when the result is out may be in form of publishing of paper, presentation in seminar or conference, playing an assignment or releasing an album- its public. The success of the event is assessed by being public. There might be so many questions before publishing the paper of being peer-reviewed or people liking the music or the fear of stage of being fail, the public and private duplicity is obvious and can be difficult to deal in both science and music. It cannot be accidental that both science and music are intended towards the mental health and there is the shared joy of fulfilment. The best appealing part of music and science is because they are beautiful.

Intellectual connection of Science and Music

A great mathematician said 'It is the logic that prove, but with institution that we discover'. These lines were said in context of underlining the inbuilt component of imagination and creativity required for discovery which suggests that science is in fact is a form of art. For over a very long period of time science has been separated from art through the prevailing belief that is very well defined and clear. It is a fact that like any language, science is based on some rules and it is evident to the fact that science is an art can be seen in music. It is now long thought that music and science are related. It is a notion that many exceptionally talented person shined both in music and science. Many papers published in journal found that the students who were playing music or engaged in music activities secured better grades in science. There are many studies that showed that students engaged in music were on average, one year ahead in academics, specially vocal and instrumental music.

It is very fascinating that studying music, students are able to do much better academically than their peers. The effects of music and their beneficial result on academic performance depends on many factors. It is very essential to note that music requires a considerable amount of time commitment which can be compared to that of science or mathematics classes where students often study lengthy problems, time spent in laboratories or try to understand mathematical proofs. Many researchers has also cited that the engagement in music aids in developing learning routines and enhances motivation. It can be attributed to the fact that learning to play music is not done overnight, it is rather a very slow and conscious process which consume years to master. Thus it can be said that habits acquired from leaning to master the music helps in other areas of life and science and thus helps to excel in life.

Endnote

Music and science are very similar in many ways. They are uncommon among all human activities on the foundation of pervasiveness and antiquity. Music teaches us about the human brain and brain teaches about the music and combine they teaches us about our own selves. Music and brain are interrelated in which music remains all part of our brain. The energy of music to elicit emotion is also very much advertised by everyone. Music is related to maths as there are certain rules and regulation likewise music is also learned. The better understanding about music will be able to understand the desires and motive and will help to enhance the communication.

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