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# Influence of Music on Freehand Drawing as a Constructive Activity

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This research concerns freehand drawing as constructive activity; it investigates the effect of this constructive activity while people listening different types of music.

In this research, constructive activity means a creation process, which is not a routine work or regular activity.

For many years, many researches has studied the influence of music on people in various topics. For example, what can be induced in terms of human mood while listening to music, and what is the influence on the efficiency or effectivity of doing routine work while listening to the music.

However, the previous research have been based on questionnaire result only. A lot of aspects related to the concequence of listening music to minor movements are less explored. More detailed investigation is needed to acquire results of the influence of music listening on human activity.

In this research, freehand drawing is the process that will be observed; it investigates how the minor/sensitive movements, such as brush pressure and change of a stroke in drawing action, can be affected while listening to some different tonalities of music. This research aims at investigating a part of the influence which music has on people's actions.

Prior to the experiments, two kinds of different emotional characters of music which represent a cheerful impression and a melancholy/sad impression were selected.

This two different emotional characters comprised of two scales of tonality called a Major key and a Minor key in music. These can recognized to be two major different characters

which represent a cheerful impression (Major Key) and a melancholy/sad impression (Minor Key) in general. Moreover, these two kinds of predetermined music stimuli were checked to confirm that the music stimuli represent the different emotional character. The impression from the stimuli was evaluated with paper questionnaire simultaneously for both music stimuli, extracting the occurred words when each music stimulus was heard.

The drawing experiment was conducted by dividing listening conditions into two groups, by creating two kinds of music stimuli. The selected subjects were not among people with fine arts and musical education backgrounds. In the first experiment, they were requested to hear two kinds of music stimuli and draw the picture of a scenery which came to mind from the impression of each music stimulus. The tested subjects took counterbalance by dividing into two groups in the turn of hearing a music stimulus.

In the second experiment, using the recalled words from the music stimulus extracted on the occasion of impression evaluation of a music stimulus, two drawing themes were set up beforehand and a drawing task was performed.

On that occasion, the music stimulus were presented with instruction of "Please fitting this headphone. The reason is intercept the outside sound", and it is considered in this way the consciousness might be turned as much as possible to music.

Counterbalance was taken by tested subjects by doing division into two groups with presenting different kind of music stimulus, and also dividing the two groups according to their turn in drawing the drawing themes, resulting into a total of four groups.

In the two experiments the picture which the subject that has been drawn then were evaluated using the same paper questionnaire, as the one used on the occasion of evaluation of participant's music stimulus.

As a result of the first experiment, a significant difference was detected when listening to music stimulus, resulting in the longest stroke time and stroke speed. Moreover, the result of impression evaluation of the drawn picture and tested subject of the music stimulus which was being heard show a correlation. This result showed that the impression of a music stimulus was strongly reflected in the picture.

In the second experiment, the difference of the average brush pressure level became significant between the two conditions of a listening to music stimuli.

Moreover, it was common in these two experiments, that the stroke speed and sound pressure of the test subjects who performed drawing showed a correlation, regardless of the kind of drawing theme when hearing a music stimulus of a cheerful impression. Furthermore, in the second experiment, even if the drawing theme was different, it turned out that stroke speed

shows correlation while hearing the same music stimulus.

Regarding the impression evaluation of the drawing of the second experiment, although the difference in evaluations when listening to different music stimuli was not significant, a high correlation was observed the evaluation result of the used music stimulus and the basis of the drawing theme of the picture.

As a conclusion, when the picture was drawn while listening to music, it turned out that different kind of music stimuli affects the motion of drawing. Furthermore, when drawing while listening to music stimulus with cheerful impression, correlation was found between the sound pressure and stroke speed, and it was shown that drawing process may synchronize with the musical deployment. In the future, we consider the dynamic change of music style, used as another music stimulus, to develop new research that will disclose the influence of listening to music on other human activities.