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Musical Ability and Interpersonal Intelligence in The Late Childhood Period

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Abstract

Learning to adjust to peers and develop attitudes towards social groups and institutions is one of the developmental tasks of late childhood. Musical abilities present as innate and function since childhood.Associated with two things namely interpersonal intelligence and musical abilities, both are being developed in late childhood. This study aims to determine whether there is a relationship between musical ability and interpersonal intelligence in the late childhood period. This research uses quantitative research method with the type of correlation. The population of this research was all students in grade 1-3 of Pangen Gudang Purworejo State Elementary School with a total of 107 people. The sample in this study was taken proportionally stratified random sampling, with a sample size of 32 people. The data collection was carried out by using questionnaire and test techniques. The data analysis uses product moment correlation, with musical ability as the independent variable and interpersonal intelligence as the dependent variable. The result showed that there was a strong and significant positive relationship between musical abilities and interpersonal intelligence in children during late childhood period. This evidence was obtained by r count > r table (0.643> 0.349) at 5% significance level. This means that the higher the musical ability, the higher the interpersonal intelligence students will have.

***Keywords**: Musical Ability, Interpersonal Intelligence, Late Childhood*.

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INTRODUCTION

Every child has the opportunity to develop their full potential. They have different abilities from one another. Similarly, the ability in the music field. To measure musical ability, Gordon developed his instrument into PMMA (Primary Measures of Music Audiation), where musical abilities of kindergarten age children up to level 3 are sufficiently measured through 2 aspects namely tonal and rhythm imagery. Each of these two aspects can be developed through recognition of tone, melody, harmony, beats, and tempo. Children who have good musical ability does not mean they have skills to play good music.

George and Hodges argue that musical ability is sensitivity to respond or sensitivity to musical stimuli which includes appreciation and understanding of music without having the skills to play an instrument (Djohan, 2009). From the opinion of George and Hodges, it can be said that someone who cannot play an instrument does not necessarily have a low musical ability. The factors that influence musicality are musical experience, intelligence, listening ability, ability to demonstrate, ability to be creative, gender, cultural background and race. We may realize it or not, every human being has his own experience regarding music in line with the learning process.

Musical ability is related to rhythm sensitivity, followed by the ability to understand and interpret music, thoughts and feelings through tone expressions, ability to communicate through sound, motivation to engage with music, and ability to successfully engage music with others (Hallam, 2010). A sharper differentiation of terms put forward by Lundin (Sumaryanto, 2000) which distinguishes between musical abilities and musical talents. Musical abilities lead to an understanding of the ability to receive musical stimuli, which is more related to sensitivity, feelings, and appreciation of music. While musical talent leads to performance abilities in music, such as musical expression through playing musical instrument.

Musical ability refers to the innate ability inherent in the individual in responding to musical elements. There are several aspects that develop in musical ability, namely sense of pitch, sense of intensity, sense of intensity, sense of time, sense of consonance, and tonal memory (Seashore, 2011). Similarly, according to Gordon MAP "Measure of Music Audiation (Gordon, 1967) musical abilities of children aged 4-12 can be measured through 3 aspects, namely tonal imagery (melody and harmony), rhythm imagery (tempo and meter), and musical sensitivity (phrasing, balance and style). Then developed in Gordon PMMA (Primary Measures of Music Audiation), the musical ability of children of kindergarten to level 3 is sufficiently measured through 2 aspects namely tonal imagery and rhythm imagery (Gordon, 1979).

Furthermore, aspects of musical ability according to Dyson & Gabriel (Sumaryanto, 2000) are the introduction of pitch, harmony, experience, musical assessment, intensity which includes the ability to respond to the quality of tones and tones. From the expert's opinion, it can be concluded that aspects of musicality for children in their late childhood development consist of tonal and rhythmic, each of which can be developed through the introduction of tones, melodies, harmony, beats, and tempo.

Understanding continues to grow in accordance with the efforts, intentions and interests of a person in the field of music. Music serves as a tool to enhance and to foster personal and social abilities, in order to maintain a healthy and mutually beneficial interpersonal relationship (Djohan, 2009). Building an interpersonal social relationship is one aspect of interpersonal intelligence. Other aspects of interpersonal intelligence consist of many

things, namely organizing groups, conflict resolution skills, being a mediator to reach an agreement, empathy skills and relationships with others so that they are able to involve in a relationship, the ability to understand the feelings of others, the ability to make friends, learn to trust and express affection.

Learning to adjust to peers and develop attitudes towards social groups and institutions is one of the developmental tasks of late childhood. Therefore, having friends is important for children's development. Late childhood is a group age because children want to be accepted by their peers and adjust in appearance, speech and behaviour (Hurlock, 2014). Therefore, in this late childhood period, children are experiencing the task of development from the aspect of interpersonal intelligence that is trying to understand or understand others since they spend a lot of time with their peers.

Interpersonal intelligence is one of the 9 multiple intelligences discovered by Gardner in the theory of Multiple Intelligence. Interpersonal intelligence is the ability to understand and predict feelings, temperaments, moods, intentions and desires of others and respond appropriately. Individuals with a high level of interpersonal intelligence not too experienced difficulty in establishing relationships with others, both with new people and old friends (Goleman & Boyatzis, 2017). It is this intelligence that enables one to build closeness, influence, leadership, and build relationships with the community.

Interpersonal intelligence revealed (Altan et al., 2001) is the ability to perceive and distinguish the moods, intentions, motivations, and feelings of others. Similarly, interpersonal intelligence is a person's ability to communicate with others or one's ability to get along or socialize (Wijanarko, 2010). From this description, it can be concluded that interpersonal intelligence is the ability of individuals in social understanding, social sensitivity, and the skills to establish social communication, in order to maintain a healthy and mutually beneficial interpersonal (social) relationship.

A person's intelligence cannot be limited by the indicators that exist in the achievement test (formal test). Because someone's intelligence is always developing (dynamic), not static. Interpersonal intelligence includes sensitivity to facial expressions, sounds, gestures; ability to distinguish various kinds of interpersonal signs; and the ability to respond effectively to these signs with certain pragmatic action (Armstrong, 2018). However, there are several aspects that can be used to determine someone's level of interpersonal intelligence. Aspects of interpersonal intelligence are organizing groups, negotiating problem solving, personal relationships, and social analysis. Each aspect is a unified whole and complement to each other (Gardner & Hatch, 1989).

Furthermore, interpersonal intelligence has 3 dimensions, namely social insight, social sensitivity, and social communication (Anderson, 1999). Social insight is the ability to understand and look for effective problem solving in a social interaction, so that these problems do not hamper the social relations that have been formed. Social sensitivity is the ability of individuals enabling them to feel and observe the reactions or changes of other individuals that are shown both verbally and non-verbally. Social communication is the ability to communicate both verbally and non-verbally. Communication skills include skills for listening, speaking, public speaking, and writing effectively.

In the theory of development by Hurlock, late childhood is in the age range of 6-11 years. Educators call this age elementary school age. Psychologists call this age as group age, age of adjustment, creative age, and age of play. The tendency of children in their late childhood period is

to get along with peers, form groups, and make agreements between themselves and their friends sometimes to get the attention and priority from their parents (Santrock, 2011). Late childhood period is often referred to as group age because it is characterized by an interest in the activities of friends and a strong desire to be accepted as a member of a group, and feel dissatisfied if they are not with friends (Hurlock, 2014).

The development in late childhood period includes learning to adjust to peers and developing attitudes towards social groups and institutions (Soetjiningsih, 2018). Therefore, having friends is important for children's development. Furthermore, through interactions with friends, children learn a lot about social skills, control emotions and respond to their friends' emotions. Psychologists call this age group age because children want to be accepted by their peers and adjust to appearance, talk and behave (Hurlock, 2014).

Musical abilities present as innate and function since childhood (Seashore, 2011). Associated with two things namely interpersonal intelligence and musical abilities, both are being developed in late childhood. These aspects will be seen whether they have a relationship on both positive and negative, or not related at all. The answer to this question is expected to help the process of achieving learning goals in late childhood.

RESEARCH METHODS

This research uses quantitative approach with a correlational type. There are 2 variables in this study, musical ability as an independent variable and interpersonal intelligence as a dependent variable. The population in this study were all students in grades 1-3 of Pangen Gudang Purworejo Elementary State School, with a total of 107 students. Samples were taken using proportionate stratified random sampling technique and obtained a number of 32 students.

Data collection techniques in this study were tests for musical abilities and closed questionnaires for interpersonal intelligence. As for the musical ability, the test instrument was adapted from PMMA from Edwin Gordon which consists of two indicators namely tonal imagery with sub-indicators distinguishing tone, melody and harmony. The second indicator is rhythm imagery with sub-indicators determining the tempo and imitating the rhythm. The assessment of musical ability tests uses a rating scale of 0 for those who do not answer, 1 if the answer is wrong, and 2 if the answer is correct.

The interpersonal intelligence questionnaire instrument was adapted from the Anderson dimension with several adaptations according to the research's needs. There are 3 (three) aspects, namely social insight, social sensitivity, and social communication. Social insight consists of 3 indicators, namely the ability to develop self-awareness, the ability to have a social understanding and social ethics, and the ability to find effective problem solving. Social sensitivity consists of 2 (two) indicators, namely the ability to have an attitude of empathy for others and the ability to have a prosocial attitude towards others. Social communication consists of 2 (two) indicators, namely the ability to communicate effectively and the ability to listen effectively. Each respondent's answer is then weighted using a Likert scale with four grading levels: strongly agree, agree, disagree and strongly disagree.

Both test instruments have been validated through content validation using "Expert Judgment" and construct validation with Pearson product moment correlation techniques, and their reliability was tested using Cronbach's Alpha. If the reliability based on an Alpha value exceeds 0.6, then the statement of the variable is reliable and if Alpha is less than 0.6, then the statement of the variable is not reliable (Quadratullah, 2014). The analysis showed that the Alpha value of 0.806 on the musical ability test

instrument and the Alpha value of 0.841 on the interpersonal intelligence questionnaire instrument. From the results of the analysis, it can be concluded that the instrument of musical ability tests and interpersonal intelligence questionnaires are reliable.

Hypothesis testing in this study uses Product Moment correlation analysis with guidelines if r arithmetic ≥ r table at a significance of 5%, then the relationship is significant, whereas if r arithmetic < r table then the relationship is not significant. The criteria for the r table for a sample of 32 is 0.349 so that the coefficient of r count less than 0.349 will be declared as not having a significant relationship (Quadratullah, 2014). Before testing the hypothesis, a prerequisite test is a normality test and a linearity test with normal and linear results.

Normality test is used to determine whether the data from each variable is normally distributed or not using the Kolmogorov Method Smirnov. The test criteria is if the sig value> 0.05, the data is assumed normal and vice versa if the value of sig <0.05 then the data is assumed not normal. Normality test results are in the table 1.

Table 1. Normality Rest Results

		Interpersonal Inttelligence	Musical Ability
N		32	32
Normal Parameter	Mean	74.94	38.50
	St. Dev	8.351	4.385
Most Extreme Dif	Absolute	.138	.196
	Positive	.138	.152
	Negative	-.144	-.196
Kolmogorov Smirnof Z		.783	1.111
Assymp Sig (2 tailed)		.572	.169

From table 1 it can be seen that the results of the variable normality test musical ability of 0.169> 0.05 and interpersonal intelligence of 0.572> 0.05. In the sample group has a significance greater than the alpha value set, which is 5% (0.05). Could it was concluded that all sample groups came from populations that were have a normal distribution.

In this study, linearity can be known through the linearity test table. Anova by finding the value of Deviation from Linearity from the linear F test. The criteria used is if value the significance coefficient of Deviation from Linearity is more than the alpha value of 0.05 then the relationship between variables is linear. Based on calculations was obtained summary of linearity test results in table 2.

Table 2. Linearity Test Results

		Sum of Squares	F	Sig
Interpersonal Intelligence	Between Groups (Combined)	1455.6	3.264	.011
	Linearity	894.1	24.056	.000
Musical Ability	Deviation from Linearity	561.5	1.373	.262
	Within Groups	706.2		
	Total	2161.9		

From the results of the calculation of table 2, it can be explained that the coefficient value the significance of Deviation from Linearity for one independent variable is 0.262> 0.05 (alpha value). Thus it can be said that happened linear relationship between independent variables (musical ability) to dependent variable (interpersonal intelligence).

RESULT AND DISCUSSION

From the results of musical ability test scores obtained, it showed that the average children in late childhood in this study, who were the sample of students in grades 1-3 of Pangen Gudang Purworejo Elementary State School have very high musical abilities. This is indicated from the average value in table 3 of 38.5 including the very high criteria.

Table 3. Total Score of Musical Ability Test

No	Score	No	Score
1	41	17	36
2	40	18	40
3	39	19	43
4	41	20	42
5	38	21	35
6	42	22	34
7	41	23	32
8	40	24	39
9	41	25	42
10	25	26	43
11	36	27	35
12	42	28	40
13	32	29	41
14	37	30	43
15	43	31	36
16	40	32	43
	Total score		1232
	Average		38,5

The criteria for evaluating musical ability tests are the score 0-8 including the very low category, the score 9-17 including the low category, the score 18-26 including the medium category, the score 27-35 including the high category, and the score 36-46 including the very high category. The majority of these very high musical abilities are due to musical experiences gained from outside the school, for example through electronic media that often presents songs so that children are interested in listening to music. Moreover, studying music at school until in the school curriculum is media and education facilities for attitude, and character of students (Rumapea, 2019). Besides stimulating about music from the immediate environment as one of the musical experiences is very supportive of his musical abilities. For example, clean the house while singing, play guessing while singing, clapping while listening to songs, and so forth. Musical ability can develop optimally when it is supported by practicing to have skills, playing music or listening to music.

Musical ability is influenced by several factors, namely intelligence, the ability to hear, the ability to demonstrate, the ability to be creative, gender, cultural background and race. In this study the dependent variable that will be associated with musical ability is one of multiple intelligence, namely interpersonal intelligence. Interpersonal intelligence as the dependent variable in this study measured by using a questionnaire with a Likert scale showed that the average grade 1-3 students of Pangen Gudang Purworejo Elementary State School have high interpersonal intelligence. This is indicated from the average value in table 4 is 74.9 which is included as the high criteria. The interpersonal intelligence questionnaire assessment criteria are, the score 0-18 is regarded as very low category, the score 19-37 is considered as the low category, the score 38-57 is served in the moderate category, the score 58-76 is belonged to the high category, and the score 77-96 is viewed as the very high category.

Table 4. Score of Interpersonal Intelligence

No	Score	No	Score
1	73	17	70
2	80	18	68
3	71	19	85
4	71	20	86
5	67	21	71
6	72	22	83
7	73	23	70
8	79	24	62
9	74	25	85
10	54	26	87
11	70	27	67
12	83	28	71
13	73	29	84
14	74	30	90
15	80	31	65
16	83	32	67
	Total score		2398
	Average		74,9

Interpersonal intelligence which is mostly classified as high or very high criteria can be caused by many things, including classroom management that requires children to sharpen their ability to communicate with others, discussion or group learning activities that also require communication skills with others, family and other social environment factors. As has been revealed in the results of the study, the correlation analysis shows a strong positive correlation between musical ability and interpersonal

intelligence where the R coefficient value of 0.643 can be seen in table 5.

Table 5. Correlation Analysis Results

		Interpersonal Intelligence	Musical ability
Interpersonal Intelligence	Pearson Correlation	1	0.643
	Sig (2-tailed)		.000
	N	32	32
Musical ability	Pearson Correlation	0.643	1
	Sig (2-tailed)	.000	
	N		32

From the results of the analysis in table 5 which is interpreted based on the interpretation of the correlation coefficient guidelines in table 6, it is shown that there is a strong level of relationship between musical ability and interpersonal intelligence in late childhood period.

Table 6. Correlation Coefficient Guidelines

Coefficient interval	Correlation level
0.00 – 0.199	Very low
0.20 – 0.399	Low
0.40 – 0.599	Medium
0.60 – 0.799	Strong
0.80 – 1.000	Very strong

The r count value of 0.643 (greater than r table is 0.349) indicates that the musical ability variable and the interpersonal intelligence variable have a positive and significant relationship. This is also supported by the significance value, if the significance value is smaller than the level of significance (sig <5%) means that there is a significant relationship between the independent variable and the dependent variable.

CONCLUSION

Based on the results of research obtained from the results of the analysis conducted, it can be concluded that there is a significant, strong and positive relationship between musical ability and interpersonal intelligence in children during early childhood development. This shows that the higher the musical ability, the higher the interpersonal intelligence possessed by children in late childhood. Musical elements that hone musical sensitivity are able to have an impact on sensitivity in interacting with others, especially in late childhood where interpersonal intelligence begins to develop. In addition, the results of this study indirectly provide evidence that two of multiple intelligence from Gardner namely musical and interpersonal are interrelated.

The results of this study can be used as a guide to explore deeper musical talent in students musical abilities especially in late childhood. This research can be used as consideration for research others that are relevant to the problem, and also as additional information for the community to be able to provide musical experiences in children since childhood.

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