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**Original Article**

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## The Influence of Self-expression of Children with Intellectual Disabilities Participating in the Art Integration Movement Program on Self-Efficacy

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## **Abstract**

### **PURPOSE**

The purpose of this study is to analyze how the self-expression of intellectually disabled children participating in movement programs applied at art integration education affects their self-efficacy

### **METHODS**

To investigate the effects of the art-integrated movement program, 20 students with a second-grade intellectual disability were recruited from 1st grade to 4th grade of a special school in B metropolitan city. Ten students that applied for the dance program were assigned the art-integrated movement program, whereas the other students were who did not participate in the dance class but participated in a school program (music, art, and physical education class) were assigned the control group. Each of the classes were consists of 40 minutes sessions per week (two times/week) for a period of 12 weeks. Data were compiled and analyzed by SPSS window program (Ver. 21.0). Additionally, regression analysis was conducted to analyze the effects of self-expression on self-efficacy.

### **RESULTS**

Children with intellectual disabilities who participated in the art integration movement program had an impact on their confidence in contents self-expression ( $t=3.087, p<.01$ ) and voice self-expression ( $t=2.766, p<.01$ ). contents self-expression ( $t=3.940, p<.001$ ) affected self-regulating efficacy. and contents self-expression ( $t=4.057, p<.001$ ) had a positive effect on the preference to task

### **CONCLUSIONS**

The movement program that applied art integrated education suggests that self-expression of children with intellectual disabilities is an effective education to increase self-efficacy. A multifaceted study that is practically applicable in the field of special education is needed.

**Index** : [movement of art integration](#), [self-expression](#), [self-efficacy](#), [intellectual disability](#)

**Keywords**: [Art-integration movement](#), [Self-expression](#), [Self-efficacy](#), [Intellectually disabled](#)

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## **Introduction**

When it comes to movement, you usually think of the motor development aspect. However, as human movement is integrated with various fields of art today, it means not just movement development, but intellectual improvement, creativity, self-expression, and conceptual formation together to develop intellectual or psychological ability, enriching its meaning in various fields Make it more meaningful.

In modern society, art is expressed in various forms of human culture, and in recent years, interest in interdisciplinary research on humanities and science is increasing [ [1](#) , [2](#) ]. The effects of these artistic activities affect not only enjoyment but also human psychological health and cognitive

and emotional development [ 3 ]. In addition, they have the opportunity to express themselves through artistic practice, and the aesthetic experience through art is used as a channel to discover themselves [ 4 ].

From this point of view, art activities in childhood are essential. In particular, children with intellectual disabilities, who are subject to special education, have significant deficiencies in social skills and emotional control abilities throughout their development, so a kinematic approach from an art-integrated perspective is needed for solving physical functions and psycho-emotional problems [ 5 , 6 ].

The most striking characteristic of children with intellectual disabilities is their intellectual abilities, and they believe that they cannot do it themselves because of their low abilities, resulting in frequent failures [ 7 ]. In addition, children with intellectual disabilities who have difficulty expressing their emotions have difficulties in communication, resulting in atrophy of interpersonal relationships, anxiety, and stress, indicating a delay in emotional development, language development, and cognitive development [ 5 , 8 ]. To solve these problems, they must cope with their unique educational needs, and for this, individualized and specialized educational practices must be implemented.

Recently, treatment programs and educational programs applying various arts are being activated in the field of special education. However, the problem with these programs is that they do not consider the disability level of children with intellectual disabilities. The standards of each level of intellectual disability in Korea have a lot of influence on intellectual ability. Therefore, when educating children with intellectual disabilities, the level of intellectual ability must be considered, and this has the same meaning in the therapeutic approach. Therapeutic approach through the arts has been variously done in music, art, dance, and is reported to have a positive impact on the multifaceted aspects of art from the prior research study of intellectual disability [ 9 - 15 ] . However, previous studies mainly focused on programs emphasizing the purpose of treatment, and studies reflecting the evaluation of parents in connection with the family were insufficient. In addition, the need for research on individualized education programs considering the types and grades of intellectual disabilities and characteristics of disabilities is raised because there are mixed disability classes that must be considered. Thus, the art integrated movement program will act as a factor that induces interest by promoting sensory stimulation to children with intellectual disabilities who are slow in development and poor in expression. This will provide psychological stability and provide a good opportunity for interaction and formation of relationships with peers beyond simple enjoyment, and it will be a learning to learn the method of self-expression [ 5 , 15 ] .

Therefore, the purpose of this study is to analyze how self-expression of children with intellectual disabilities who participated in the integrated arts movement program affects their self-efficacy.

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## Research method

### 1. Research subject

This study was conducted on 20 children with intellectual disabilities in grades 1-4 (with an intelligence index of 35 or more and 49 or less) attending D special school in B metropolitan city [ 15 ]. Among the children of the study, 10 children who selected the 'dance club activity' were selected as an experimental group and provided an art integrated movement program education twice a week for 12 weeks (Monday, Wednesday), 40 minutes each time, during creative experience activities. , The control group was '10 children who did not choose dance club activities, and only provided independent subject education provided in the curriculum of music, art, and physical education. This study started with the consent of the parents, and the characteristics of the experimental group are shown in [Table 1](#), and the characteristics of the control group are shown in [Table 2](#) .

#### Table 1.

Characteristics of the experimental group

	Gender	School year	Characteristics
A	Boy	2	Good at expressing one's intention, learning is possible
B	Boy	2	Get along well with my friends.
C	Boy	2	Anxious and distracted
D	Boy	3	Have a good concentration
E	Boy	3	Mild-mannered and like to dance
F	Boy	4	Good at expressing one's opinion, lack of concentration
G	Boy	4	Strong obsession with strap
H	Girl	1	Like dancing to music
I	Girl	3	Mild-mannered, socialize with friends
J	Girl	4	Interaction is possible, like to play activity



Download Table

**Table 2.**

Characteristics of the control group

	<b>Gender</b>	<b>School year</b>	<b>Characteristics</b>
A	Boy	1	Strong aggressive but like to dancing
B	Boy	1	Passive character but like to expressions
C	Boy	1	Concentrative but annoying
D	Boy	2	Passive and unwilling to move
E	Boy	2	Get along with friends but unwilling to move
F	Boy	4	Communicatable and have learning ability
G	Girl	3	Distracted and Stubborn.
H	Girl	3	Good cognition, but distracting
I	Girl	4	Strong willing to study, but distracting
J	Girl	4	Very active and like to play

[Download Table](#)

## 2. Research tools

### 1) Self-expression test tool

The self-expression test tool used in this study used a questionnaire modified and supplemented according to the level of children with intellectual disabilities, and was used as an evaluation criterion by applying the Likert-style 5-point scale [ 15 ]. In order to increase the reliability of the study, the questionnaire of the test tool was analyzed using the evaluation of a parent (1 person) and a special school teacher (2 full-time teachers, 2 assistant teachers) who participated in this study and took an auxiliary role. Is shown in [Table 3](#) .

**Table 3.**

Configuration of the self-expression questionnaire

Variable	Division	Content	Question Number
Self - expression test	Contents	There are lots of self-expression elements in their speech	1-9
	Voice	Voice is correct and clear that the other person can understand easily	10-16
	Body language	Their facial expressions, hands and feet move naturally	17-20

 [Download Table](#)

## 2) Self-efficacy test tool

The self-efficacy test tool used in this study used a questionnaire modified and supplemented according to the level of children with intellectual disabilities, and was used as an evaluation criterion by applying the Likert-style 5-point scale [ 16 ]. In order to increase the reliability of the study, the questionnaire of the test tool was analyzed using the evaluation of a parent (1 person) and a special school teacher (2 full-time teachers, 2 assistant teachers) who participated in this study and took an auxiliary role. Is shown in [Table 4](#) .

### Table 4.

Configuration of the self-efficacy questionnaire

Variable	Division	Content	Question Number
Self-Efficacy test	Confidence	The conviction or belief in one's ability to action	1-5
	Self-regulating efficacy	The degree of self efficacy whether the self-control mechanism can be applied well	6-10
	Preference to task	Degree of preference for specific tasks and goals	11-15

 [Download Table](#)

## 3) Reliability and validity of research tools

### (1) Reliability and validity of self-expression test paper

Conceptual validity was examined to evaluate whether the measurement tool for the self-expression test paper actually measured properly. In a total of 20 variables, 15 variables were selected excluding 5 items (1, 2, 3, 4, 6) with a factor loading value of .60 or less. Was shown as content self-expression .667-.835, phonetic self-expression .653-.811, body language self-expression .745-.859, and the validity of the constituent concept

was secured. As a result of reliability analysis, Cronbach's  $\alpha$  coefficient of the entire item for each constituent concept was found to be content self-expression .732, phonetic self-expression .866, and body language self-expression .807. Cronbach's  $\alpha$  coefficient at time was found to be .601-.718 for content self-expression, .836-.860 for phonetic self-expression, and .716-.787 for body language self-expression. The results are shown in [Table 5](#).

**Table 5.**

The reliability and validity of self-expression questionnaire

Concept Variable	Number	Factor loading value	Cronbach $\alpha$ for deleted item	Total Cronbach a	Removed number
Self-expression (contents)	5	.667	.718	.732	1, 2, 3, 4, 6
	7	.688	.707		
	8	.782	.650		
	9	.835	.601		
	10	.811	.836		
Self-expression (voice)	11	.729	.850	.866	
	12	.785	.841		
	13	.723	.850		
	14	.782	.841		
	15	.727	.849		
	16	.653	.860		
Self-expression (body language)	17	.768	.776	.807	
	18	.813	.748		
	19	.859	.716		
	20	.745	.787		



(2) Reliability and validity of self-efficacy test paper

Conceptual validity was examined to evaluate whether the measuring tool for the self-efficacy test was actually properly measured. In a total of 15 variables, 14 variables were selected, excluding one item (3) that had a factor loading value of .60 or less. As a result of confirmatory factor analysis, the loading value for each item on the self-efficacy test sheet was confidence .776-.836, The self-regulation efficacy was .703-.837, and the task difficulty was preferred .636-.826, confirming the validity of the composition concept. As a result of reliability analysis, Cronbach's  $\alpha$  coefficient of the entire item for each constituent concept was found to be confidence .827, self-regulation efficacy .853, and task difficulty preference .787. Cronbach's  $\alpha$  coefficient when inappropriate items were removed from each constituent concept Was found to be confidence .766-.805, self-regulation efficacy .809-.845, and task difficulty preference .713-.779. The results are shown in [Table 6](#) .

**Table 6.**

The reliability and validity of self-efficacy questionnaire

Concept Variable	Number	Factor loading value	Cronbach $\alpha$ for deleted item	Total Cronbach a	Removed number
Confidence	1	.810	.784	.827	3
	2	.828	.770		
	4	.776	.805		
	5	.836	.766		
	6	.803	.823		
Self-regulating efficacy	7	.823	.816	.853	
	8	.837	.809		
	9	.703	.845		
	10	.808	.818		
	11	.636	.779		
Preference to task	12	.737	.768	.787	

13	.736	.753
14	.826	.713
15	.742	.752

 [Download Table](#)

### 3. Composition of art integrated movement program

The composition of the integrated arts movement program of this study was constructed based on the 'Meeting Arts' area consisting of the integrated arts education for the first and second graders, dance teaching materials in elementary school published by the Korea Culture and Arts Education Promotion Agency [ 17 ]. The entire program consisted of a total of 24 programs with 8 basic movements, 8 applied movements, and 8 deep movements, with a content of 40 minutes per time, twice a week for 12 weeks. The basic movements were to learn non-moving movements, movement movements, and operational movements, which are the basic areas of movement, and to recognize body sensations through sensory stimulation. In the applied movement, the movements learned in the basic movements were expanded using visual, tactile, and auditory images using the flow of the beat, the intensity of the movement, and the change in the height of the movement. In the deeper movement, the movement of the swan was searched to induce the expression of imagination and one's own thoughts about the swan as improvised movements. In addition, the stage of the swan movement was made so that he could control his movement through repeated practice with music. [Table 7](#) shows the composition of the art integrated movement program .

#### Table 7.

Art integration movement program

<b>Movement</b>	<b>contents of integrated activities</b>	<b>Improvement</b>
1	Basic movement	Self-introduction with movement
2		self-expression
3		Introduce a friend with movement
4		Make a space with movement
5		self-expression
6		Movement with friends
		self-expression
		self-efficacy

7		Game movement	self-expression
8			self-efficacy
9	Application movement	Make a figure with movement (fast, slowly)	self-expression
10			self-efficacy
11		Make a number with movement (strongly, weakly)	self-expression
12			self-efficacy
13		Make a consonant and vowel with movement	self-expression
14			self-efficacy
15		Make a alphabet with movement	self-expression
16			self-efficacy
17	Intensified movement	Express a animal with movement	self-expression
18			self-efficacy
19		Search the swan movement	self-expression
			self-efficacy
20		Express the swan movement1	self-expression
21			self-efficacy
22		Express the swan movement 2	
23			self-expression
24		Perform the swan movement	self-efficacy



Download Table

#### 4. Data processing method

The data of this study is SPSS Ver. 21.0 Using the Window program, factor analysis and reliability analysis were performed to test the validity of the measurement tool, and stepwise regression analysis was performed to analyze the effect of self-expression on self-efficacy. The significance level of all statistical analysis was set to  $\alpha=.05$ .

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#### Results

##### 1. The effect of self-expression on self-confidence

For children with intellectual disabilities who participated in the art integrated movement program, content-based self-expression ( $\beta =.314$ ) and vocal self-expression ( $\beta =.281$ ) had a positive effect on self-confidence. The F value was 17.561 ( $p <.001$ ), the regression equation was significant, and the explanatory power was 26.8%. The results are shown in [Table 8](#) .

**Table 8.**

Influence of self-expression on confidence

Variable	With a	I KNOW	b	t
Constant	.229	.337		.679
self-expression (contents)	.278	.090	.314	3.087**
self-expression(voice)	.239	.086	.281	2.766**

F = 17.561\*\*\*, R<sup>2</sup> = .268

\*\*  $p <.01$ ,

\*\*\*  $p <.001$ .



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##### 2. The effect of self-expression on self-regulation efficacy

In children with intellectual disabilities who participated in the art integrated movement program, content-specific self-expression ( $\beta=.371$ ) had a positive effect on self-regulation efficacy. The F value was 15.526 ( $p <.001$ ), the regression equation was significant, and the explanatory power was 13.8%. The results are shown in [Table 9](#) .

**Table 9.**

The effect of self-expression on self-regulating efficacy

Variable	With a	I KNOW	b	t
Constant	.878	.263		3.339 <sup>***</sup>
self-expression (contents)	.269	.068	.371	3.940 <sup>***</sup>

F = 15.526<sup>\*\*\*</sup>, R<sup>2</sup> = .138

\*\*\* p < .001.

 [Download Table](#)

### 3. The effect of self-expression on the preference of task difficulty

For children with intellectual disabilities who participated in the integrated arts movement program, content-specific self-expression ( $\beta = .381$ ) was found to have a positive effect on their preference for task difficulty. The F value was 16.460 ( $p < .001$ ), the regression equation was significant, and the explanatory power was 14.5%. The results are shown in [Table 10](#).

**Table 10.**

The effect of self-expression on the task preference

Variable	With a	I KNOW	b	t
Constant	.835	.198		4.212 <sup>***</sup>
Self-expression (contents)	.209	.051	.381	4.057 <sup>***</sup>

F = 16.460<sup>\*\*\*</sup>, R<sup>2</sup> = .145

\*\*\* p < .001.

 [Download Table](#)

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### Argument

This study analyzed how self-expression of children with intellectual disabilities who participated in the integrated arts movement program affects their self-efficacy. As a result, it was found that for children with intellectual disabilities who participated in the integrated arts movement

program, self-expression had a positive effect on self-confidence, self-regulation efficacy, and task difficulty preference. These results can be seen as the result of learning of function through repetitive movement training [ 18 ]. Art integration is judged to have a positive effect on self-confidence as it acts as a medium to induce active expression of movement. It is reported that creative art intervention enables self-expression, and it is reported that the confidence once increased is transferred to other situations [ 19 , 20 ].

Self-efficacy is an individual's belief in one's ability to perform and achieve tasks that can produce favorable outcomes even in the face of a disability [ 20 ]. The movement of art integration of children with intellectual disabilities is seen as the result of making and expressing movements with their peers rather than learning a specific concept or function, and the emotion of pleasure stabilizes anxious psychology and has a positive effect on their behavior. In addition, as a result of giving achievement and satisfaction by inducing motivation and attention, active and active participation in class, faith and control ability in oneself increased, which would have a positive effect on self-regulation efficacy. Belief in efficacy not only exerts influence over behavior, but is also related to self-regulation, motivation, and emotional and physiological states of thought processes [ 21 ].

Children with intellectual disabilities who participated in the art integrated movement program were provided with opportunities for self-expression and increased their ability to express their emotions, thereby reducing their fear of expressing their emotions. Is shown. This result is judged to be due to self-expression through group play and confidence in self in specific situations through repetitive activities. These positive emotional reactions change the nature and process of thinking, thereby affecting the creation of a favorable environment for oneself by changing behavior decisions [ 21 ]. The belief in the efficacy of exercising control is reported to have psychosocial influences on health function, and for children with intellectual disabilities, art integrated movement programs become a means to express themselves freely, forming positive emotions as well as new It will help you acquire and maintain behavior [ 22 ].

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### **Conclusion and suggestions**

In this study, it was found that self-expression had a positive effect on self-efficacy in children with intellectual disabilities who participated in the art integrated movement program.

Since this study was limited to children with intellectual disabilities of grade 2, a follow-up study would need to be applied to children of different grades from this study to test their effectiveness and compare them by grade. And continuous research will be needed considering the difference in maturity according to experience.

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### **Acknowledgements**

This study revised and supplemented Sunmi Jang's doctoral thesis.

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### Conflict of Interest

In writing this paper, we have not received any financial support from any organization, and there is no relationship that could affect the paper.

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