

Comparison of International Cooperation Class between Australia and Korea on the Improvement of Creativity

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Abstract

The purpose of this study was to investigate the effectiveness of the International Collaborative Class (AKIC) for creativity improvement in elementary school students as part of the cross-cultural study between Australia and Korea. 203 children (121 from Australia and 82 from Korea) participated in this study. For this study was pre-post experiment design, the creative ability test (Lee, 2015) as pre-posttest was performed to them. As a result of the study, it was confirmed that the creativity of the elementary school students who participated in the international cooperation lessons was significantly improved. Gender differences were also identified. This result indicates that AKIC was effective in improving students' creative abilities. Therefore, based on these results, we can make prospects and suggest directions for future international exchange education.

Keywords: *International cooperation class, Creative ability, Cross-cultural, Integrated creativity test*

1. Introduction

The Korean government has set an educational goal of strengthening international understanding of education and promoting the necessary capabilities in the era of globalization. In this regard, the National Informatization Strategy Committee and the Ministry of Education promoted "smart education" as a future-oriented teaching and learning model, and applied a model of future classrooms designed for smart education to several schools nationwide. Though there are many types of smart education, in order to teach international cooperation, to have an online system and an agreement for educational exchange between countries is needed.

The International Collaborative Class is a type of smart education. Through the international collaborative class English communication skills and understanding of international culture will be promote to students. However, as the importance of creativity education has recently become more important, attempts to promote creativity through international cooperation classes through remote video teaching using information and communication technology have begun to diversify. This remote video classroom is provided in a form that enables real-time distance learning by providing a video conferencing system and an environment that can utilize most instructors and learners and facilitate cooperation among learners.

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International exchange cooperative learning programs are needed in order to improve creativity, English-speaking capability and diverse cultural comprehension. The iERAN (International Education and Resource Network) has provided more than two million students (in 140 countries) more than 150 diverse online learning international cooperation projects, and also provides an opportunity to foster global citizenship.

The purpose of this study was to investigate the effectiveness of the International Cooperative Class (AKIC) between Australia and Korea for creativity (creative thinking ability, creative personality) improvement in elementary students as part of the cross-cultural study.

Research problem 1: Will Korean and Australian experimental groups participating in international exchange classes improve their creative ability compared to students in the control group who did not participate in international exchange classes?

Research problem 2: Is there a difference between the two experimental groups in Korea and Australia participating in the international exchange class and the three groups of the control group not participating in the international exchange class?

Research problem 3: Will there be gender difference in creative ability by international exchange class?

2. Materials and methods

2.1. Participants

The elementary school students that participated in the study in both Australia and South Korea were assigned to two experimental groups (121 in the Australian group, and 82 in the Korean group), and a third (control) group consisting of 96 Koreans students who did not participant in the study.

Table 1. Participants

	<i>N</i> (%)	grade	<i>N</i> (%)
Australia	121(59.6)	3rd	24(11.8)
Korea	82(40.4)	4th	27(13.3)
male	100(49.8)	5th	97(47.8)
female	102(50.2)	6th	55(27.1)
Total	203(100.0)	Total	203(100.0)
Group		<i>N</i>	%
Experiment	Australia	121	40.5
	Korea	82	27.4
Total		203	67.9
Control	Korea	96	32.1
Total		299	100.0

2.2. Test

The ‘Korea Integrative Creativity Test’ (K-ICT) for elementary and secondary school students was developed by Lee; it involves two domains- language and drawing. The K-ICT can measure creative thinking ability (involving fluency, flexibility, originality, imagination, sensitivity, and elaboration) and creative personality at the same time. The creative

personality test consists of 30 items (each rated on a five-point Likert scale), and has no time limitation. The sub-factors of creativity in the creative personality consist of curiosity, sensitive personality, task commitment independence/ adventure, humor and problem-solving leadership. The reliability of K-ICT is Cronbach's alpha .94.

2.3. Procedure

The procedure is as follows; the experimental group subjects participated in 17 VC sessions, once a week, over eight months; each session lasted for 60 minutes. During the experimental period, both the Korean and Australian subjects learned and exchanged information about their respective cultures, and experienced creative activities. An Australia and Korea international cooperation program designed to improve students' creativity was implemented in both experimental groups, while the children of the control group participated in a regular elementary class.

3. Results

3.1. Effects of the AKICS program on creativity

To identify the effect of the AKICS program, the creativity test results of the two experimental groups and the control group (cg: 96 Korean) were compared using a t-test. Significant differences between the groups ($p < .05$), in regard to creativity. The children in the experimental group who participated in the AKICS program showed higher total creativity and creative ability scores than those of the control group children, but creative personality was not significant ($p > .05$). The results of an ANOVA show significant differences between the three groups, in regard to creativity and creative ability.

Significant differences between the groups in the sub-factors of creative ability ($p < .05$), with the exception of elaboration. However, there were only the sensitivity and task commitment of creative personality increased through the AKICS. This result explains the effects of the AKICS program in enhancing the creativity, creative ability, sensitivity and task commitment of the creative personality. The ANOVA results show significant differences between the three groups in creativity and creative ability. So the effect of AKICS was identified in this study.

Table 2. Creativity comparison t-test: experiment (Korea/Australia) – Control (Korea)

	Group	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
creative ability	experiment	203	43.84	14.93	2.667	297	.008
	control	96	39.30	13.16			
creative personality	experiment	203	107.57	18.02	.494	297	.621
	control	96	106.44	19.01			
creativity (Total)	experiment	203	147.02	25.94	3.433	297	.001
	control	96	134.33	36.78			

Table 3. Creativity comparison ANOVA: three groups- experiment (Korea/Australia), control (Korea)

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
creative ability	between	1452.46	2	726.230	3.833	.023
	inter	56086.20	296	189.480		
	total	57538.66	298			
creative personality	between	92.96	2	46.480	.138	.871
	inter	99946.76	296	337.658		
	total	100039.72	298			
creativity (Total)	between	10526.01	2	5263.008	5.889	.003
	inter	264518.23	296	893.643		
	total	275044.24	298			

3.2. A comparison of AKICS Groups: Australia and Korea

This section compares the differences between the two countries (Australia, Korea) in the experimental AKICS groups, using a t-test. According to the result, there were no significant differences ($p > .05$) between the two groups in regard to creativity, creative ability and creative personality (see Tables 9~11); however, the Korean children’s creativity was higher than that of the Australian children’s, in sensitivity and elaboration of creative thinking ability, and curiosity in the creative personality. The difference was statistically significant ($p < .05$). This result explained the effects of the AKICS program on enhancing creativity, creative ability and sensitivity, as well as task commitment in the creative personality.

3.3. Gender difference: experiment group (Australia and Korea)

The gender differences of the experiment groups were compared using a t-test. According to the result, there were no significant differences ($p > .05$) between males and females in creativity and creative personality; however, it showed that females were higher than males in creative ability, flexibility, originality and sensitivity, and the difference was statistically significant ($p < .05$). According to these results, it is possible to propose an AKICS class with consideration to gender differences in creativity.

Table 4. Gender difference of experiment group (Korea/Australia): Creativity T-test

	gender	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
creative ability	male	100	37.54	13.31	-2.052	.041
	female	102	41.28	12.60		
creative personality	male	100	107.65	17.97	-.136	.892
	female	102	107.99	17.53		
creativity (Total)	male	100	145.56	25.09	-1.022	.308
	female	102	149.21	25.74		

4. Discussion

The purpose of this study was to investigate the effects of the 'Australia-Korea International Cooperation Study' (AKICS) as a collaborative learning teleconference for fostering children's creativity (creative thinking ability, creative personality). For the cross-

cultural research, the AKICS program was applied for eight months in elementary schools in both Australia and Korea. The results of this study showed the significant effectiveness of the AKICS program in promoting creativity in children. As in the KERIS study (2014), in which communication had proven gains resulting from cultural exchanges between Korea and England, the children who participated in the AKICS classes also had gains in creativity.

These results identified that AKICS classes were effective not only in improving students' creativity, but also English communication ability and cultural exchanges between Korea and Australia (KERIS, 2014). Thus, because of these results, we propose the suggestions of expanding AKICS classes between Korea, Australia, and other countries, and using a similar creativity-improvement model that can be applied between the countries.

References

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