Role of Interactive Method in Developing Creativity Among 5th Graders

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Abstract

The current study investigates how interactive teaching methods foster creativity in fifth-grade students. It was a quasi-experimental study with a non-equivalent control group design. Out of all the high schools in Tehsil Jhang, two were chosen randomly. Two intact classes of fifth-graders from the selected schools, one from each (control, N = 33) and (experimental, N = 28), served as the sample of the study. The tool to be used for the research study was developed by the researcher based on the English textbook for class five. The findings of the study showed that, on measures of creativity, the experimental group did significantly better. It was observed that the experimental group was actively participating in the learning process. Also, that group was more confident in presenting creative solutions to the problems. This proved the effectiveness of the interactive method in fostering creativity.

Keywords: Interactive method, creativity, quasi-experimental, teaching of English, students

Introduction

The creativity of students in elementary school is frequently a source of worry for the English classroom. It results in low achievement for the students. Several factors contribute to the low achievement of the students in English classrooms. One of the possible reasons for the low achievement of our students is the use of passive methods in the class (Darling-Hammond, Flook, Cook-Harvey, Barron, & Osher, 2020; Freeman, Eddy, & McDonough, 2021;

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Cavanagh, Chen, Lahcen, & Paradiso, 2020; Zhang & Li, 2023; and Rowan, Correnti, Miller, & Camburn, 2022). Developing fifth-grade students' creativity through interactive methods is one possible solution to this issue. Interactive teaching methods place a strong emphasis on student engagement and active participation, which fosters a creative environment. Teachers can build a more dynamic learning environment in the classroom by incorporating interactive approaches that allow students to think critically, express themselves, and explore their unique ideas.

The development of creativity and critical thinking skills, which are essential for success in elementary school English, can be facilitated by interactive teaching methods. By using interactive teaching techniques, teachers can inspire fifth graders to express their creativity and achieve success in secondary school English. Give students as many opportunities as possible to voice their ideas. This will boost their self-confidence. Be upbeat and helpful. Express to them your appreciation for their uniqueness and your dedication to their success. Here are some more ideas for fostering creativity in fifth-graders using interactive learning methods.

Students should work to develop their creativity since it helps them to think creatively, solve issues, and come up with fresh concepts. Methods of teaching English that emphasize data memorization do not efficiently foster creativity. Conversely, interactive teaching methods involve students in active learning and inspire them to solve problems by using critical and creative thinking.

Rationale of the study

Researchers consistently shows a positive correlation of interactive method with various student outcomes (Kim, & Lundberg, 2024; Van der Vleuten, & Driessen, 2022; Chen, & Kirschner, 2022; Blair, Maharaj, & Primus, 2021; Prince, & Felder, 2020; Darling-Hammond, & Cook-Harvey, 2020 and Sivan, 2000).

Review of the related literature revealed that no prominent research was conducted in Pakistani school environment. So, a study was design to investigate the role of interactive method for developing creativity in elementary level students in Pakistan.

Statement of the Problem

This research study aims to examine the role of the interactive method for developing creativity in 5th grade students.

Objectives of the Study

The objective of this study was:
i.   To determine the existing level of creativity in 5th grade students.
ii.   To examine the role of the interactive method on developing creativity.

Review of Literature

Interactive learning is a hands-on approach to education (Phelps, & Moro, 2022; Yannier, Hudson, & Koedinger, 2020; Ma, 2023; Yannier, Hudson, Koedinger, Hirsh-Pasek, Golinkoff, Munakata, Y., . & Brownell, 2021; Krusche, von Frankenberg, Reimer, & Bruegge, 2020. It is a pedagogical approach in which a teacher actively engages students in the learning process

(Buehl, 2023; Tuma, 2021; Quadir, Yang, & Chen, 2022). Unlike traditional methods where students passively receive information, interactive learning fosters a more dynamic and meaningful educational experience (Molina Roldán, Marauri, Aubert, & Flecha, 2021). This type of learning encourages students to participate actively in their learning rather than being mere spectators. This learning connects learners to real-world situations and experiences (Yang, & Baldwin, 2020; Jong, Tsai, Xie, & Kwan-Kit Wong, 2020), this aspect makes learning more relevant and engaging. Students work together on tasks and projects, promoting teamwork and communication skills and, in turn, enhancing collaboration (Martín-Hernández, Gil-Lacruz, Gil-Lacruz, Azkue-Beteta, Lira, & Cantarero, 2021; Qureshi, Khaskheli, Qureshi, Raza, & Yousufi, 2023). They receive timely feedback on their work and are encouraged to reflect on their learning process (Dita, Utomo, & Sekar, 2021). One important addition in interactive learning is the incorporation of technology, which enhances learning experiences and provides new opportunities for exploration (Tuma, 2021; Yang, & Baldwin, 2020; Martín-Hernández et al., 2021; Avcı, & Ergün, 2022; Clark, and Mayer, 2023). Research has shown several benefits of interactive learning. Students are more likely to be engaged and motivated when they are actively involved in their learning (Buehl, 2023; Tuma, 2021; Quadir et al., 2022). As they are actively engaged in the learning process, students retain information better by connecting it to real-world experiences and encouraging active recall (Tight, 2020; Torralba, & Doo, 2020). This learning enables learners to analyze information (Buehl, 2023; Molina Roldán et al., 2021), solve problems (Buehl, 2023; Manurung, 2020), and make decisions (Clark, and Mayer, 2023), which in turn develops critical thinking in them (Faridi, Tuli, Mantri, Singh, & Gargrish, 2021; Alsaleh, 2020; Warsah, Morganna, Uyun, Afandi, & Hamengkubuwono, 2021; Sari, Sumarmi, Astina, Utomo, & Ridhwan, 2021). Further, working together on projects and tasks helps students develop effective communication and collaboration skills (Ghavifekr, 2020; Martín-Hernández, et al., 2021; Qureshi et al., 2023). This learning can be tailored to meet the individual needs and learning styles of different students.

Methodology

The design of the study was quasi-experimental with non-equivalent control group design. The control group consisted of 33, while the experimental group consisted of 28 students. The experimental group was taught through interactive method while the control group was taught through routine teaching method.

A researcher's-developed creativity test was used as tool to collect data. The test was developed from 5th class English text book. The test was to be used as pre- as well as posttest. It consisted of five parts.

i.   Development of new story
ii. Transitional devices
iii. Command sentences
iv. Instructional sentences
v.   Exclamatory sentences

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Analysis
Data were analyzed and presented in tabular form

Table 1
Comparison of control and experimental groups before the treatment on development of new story

Q.1	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*
Development of new story	12	Control	33	.03	.174	-.116	59	.90
		Experimental	28	.04	.184			

The mean scores of the control and experimental groups were compared in Table 4.1, before the treatment concerning the item "development of new story. Both control and experimental groups were equal in variance because Levene's test of Equality of Variances yielded a significance value of .81, which was greater than .05. The *p*-value for both control and experimental groups was .90 and *t* (59) was - .116 at *p*> .05. Since the *p*-value was greater than .05, so, there was no statistically significant difference between the control and experimental groups before the treatment concerning the item "development of new story."

Table 2
Comparison of control and experimental groups before the treatment on transitional device

Q.2	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*
Transitional devices	12	Control	33	.42	.83	-.67	59	.50
		Experimental	28	.57	.87			

The mean scores of the control and experimental groups were compared in table 2, before the treatment regarding the item "Transitional devices. "Levene's test of Equality of Variances yielded a significance value of .81, which was greater than .05. So, equal variance assumed. The *p*-value for both control and experimental groups was .50 and *t* (59) = - .67 at *p*> .05. Since the *p*-value was greater than .05, so, no statistically significant difference was present between the groups before the treatment regarding the item "Transitional devices."

Table 3
Comparison of control and experimental groups before the treatment on command sentences.

Q 3-i	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*
Command	4	Control	33	.15	.36			
		Experiment	28	.25	.79	-63	59	.52

sentence s		al						

The mean scores of the control and experimental groups are contrasted in table 3, before the treatment concerning the item "command sentences." Levene's test for Equality of Variances yielded a significance value of .13, as it was greater than .05, so equal variance was assumed. The *p*-value for both control and experimental groups was .52 and *t* (-59) = - .63 at *p*> .05. Since the *p*-value was greater than .05, so no statistically significant difference was found between the groups before the treatment regarding the item "command sentences".

Table 4

Comparison of control and experimental groups before the treatment on instructional sentences

Q 3-ii	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*
Instruction al sentences	4	Control	33	.18	.63	.53	59	.59
		Experiment al	28	.10	.41			

The mean scores of the control and experimental groups are contrasted in table 4, before the treatment regarding the item "Instructional sentences. "Levene's test of Equality of Variances yielded a significance value of .27, indicating equal variance assumption as it was greater than .05. The *p*-value for both control and experimental groups was .59 and *t* (59) = - .53 at *p*> .05. Since the *p*-value was greater than .05, so, no statistically significant difference was present before the treatment regarding the item "Instructional sentences".

Table 5

Comparison of control and experimental groups before the treatment on exclamatory sentences

Q 3-iii	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*
Exclamator y sentences	4	Control	33	.21	.64	-.012	59	.99
		Experiment al	28	.21	.78			

The mean scores of the control and experimental groups are contrasted in table 5, before the treatment regarding the item "exclamatory sentences. "Levene's test of Equality of Variances yielded a significance value of .87, indicating equal variance assumption as it was greater than .05. The *p*-value for both control and experimental groups was .99 and *t* (59) = - .01 at *p*< .05. Since the *p*-value was greater than .05, so, no statistically significant difference was present between the groups before the treatment regarding the item "exclamatory sentences".

International Research Journal of Management and Social Sciences, Vol. V, Issue 3, July – Sep 2024
ISSN (ONLINE):2710-0308   www.irjmss.com   ISSN (PRINT):2710-0316
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Findings after the treatment

Table 6

Comparison of control and experimental groups after the treatment on development of new story

Q. 1	Total scores	Group	N	Mean	Standard deviation	t	df	p	Eta ^{2}
		Control	33	2.24	1.22				
Development of new story	12	Experimental	28	11.43	.89	-33.97	57.50	.000	0.95

The mean scores of the control and experimental groups are contrasted in table 6, after the treatment concerning the item "development of new story. Both control and control groups were not equal in variance because Levene's test of Equality of Variances yielded a significance value of .045, as it was greater than .05 The *p*-value for both control and experimental groups was .000 and t (57.50) = -33.97 at p < .05. As the *p*-value was less than .05, so, a statistically significant difference existed between the groups after the treatment regarding the item "development of new story". The magnitude of the effect (Eta^2) was 0.95, which indicates a very large effect size, showing better achievement of the experimental group in the item "development of new story".

Table 7

Comparison of control and experimental groups after the treatment on transitional devices

Q.2	Total scores	Group	N	Mean	Standard deviation	t	df	p	Eta^2
		Control	33	1.60	1.22				
Transitional devices	6	Experimental	28	4.7	.71	-12.54	52.75	.000	0.72

The mean scores of the control and experimental groups are contrasted in table 7, after the treatment concerning the item "transitional devices. "Levene's Test of Equality of Variances yielded a significance value of .006, indicating that equal variance was not assumed as it was less than .05. The *p*-value for both control and experimental groups was.00 and t (39.59) = -14.97 at p < .05. As the *p*-value was less than .05, so, a statistically significant difference existed between the groups after the treatment regarding the item "transitional devices". The magnitude of the effect (Eta^2) was 0.72, indicating a very large effect size, demonstrating better achievement of the experimental group in the items related to "transitional devices".

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Table 8
Comparison of control and experimental groups after the treatment on command sentences

Q 3-i	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*	Eta²
		Control	33	2.15	1.12				
Command sentences	4	Experimental	28	3.92	.37	-8.00	59	.000	0.52

The mean scores of the control and experimental groups are contrasted in table 8, after the treatment concerning the item "command sentences. "Levene's Test of Equality of Variances yielded a significance value of .000, indicating that equal variance was not assumed as it was less than .05. The *p*-value for both control and experimental groups was. 000 and *t* (-8.00) = 59 at *p* < .05. As the *p*-value was less than .05, so, a statistically significant difference existed between the groups after the treatment regarding the item "command sentences". The magnitude of the effect (Eta²) was 0.52, indicating a large effect size, demonstrating better achievement of the experimental group in the items related to "command sentences".

Table 9
Comparison of control and experimental groups after the treatment on instructional sentence

Q 3-ii	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*	Eta²
Instructional sentences	4	Control	33	2.27	1.20				
		Experimental	28	3.10	.41	-3.48	59	.001	0.18

The mean scores of the control and experimental groups are contrasted in Table 9 after the treatment concerning the item "instructional sentences. "Levene's Test of Equality of Variances yielded a significance value of .000, indicating that equal variance was not assumed as it was less than .05. The *p*-value for both control and experimental groups was .001 and *t* (-3.48) = 59 at *p* < .05. As the *p*-value was less than .05, so, a statistically significant difference existed between the groups after the treatment regarding the item "instructional sentences". The magnitude of the effect (Eta²) was 0.25, indicating small effect size, demonstrating that the achievement of the experimental group was small in the items related to "instructional sentences".

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Table 10
Comparison of control and experimental groups after the treatment on exclamatory sentences

Q 3-iii	Total scores	Group	N	Mean	Standard deviation	*t*	df	*p*	Eta^2
Exclamatory sentences	4	Control	33	2.12	1.13	-4.68	59	.000	0.29
		Experimental	28	3.17	.39				

The mean scores of the control and experimental groups are contrasted in Table 10 after the treatment concerning the item "exclamatory sentences. Levene's Test of Equality of Variances yielded a significance value of .000, indicating that equal variance was not assumed as it was less than .05. The *p*-value for both control and experimental groups was .000 and *t* (-4.68) = 59 at *p* < .05. As the *p*-value was less than .05, a statistically significant difference existed between the groups after the treatment regarding the item "exclamatory sentences". The magnitude of the effect (Eta^2) was 0.29, indicating a small effect size.

Conclusions
The students of both control and experimental group were equal in performance in all items before the treatment. Equal ability students of experimental group, after undergoing the treatment, performed better. Their achievement was higher than the achievement of the students of control group in nearly all items of the creativity test. Hence interactive method proved better alternative for developing creativity in the students of 5th grade.

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International Research Journal of Management and Social Sciences, Vol. V, Issue 3, July – Sep 2024
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