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USING OF MICRO-MOVIES FOR TEACHING CHINESE WRITING AT JUNIOR HIGH SCHOOLS IN TAIWAN

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Abstract

This study is aimed to discuss the effectiveness of teaching junior high school students how to write creative Chinese composition by means of micro movies in Taiwan. In the experiment, 60 eighth-grade junior high school students in Pingtung County were recruited as participants and

divided into the experiment group (31 students) and the control group (29 students). Eight teaching experiments were carried out in addition to the pre- and post- experiment tests. As suggested in the findings, by using micro-movies, the students' writing performance was improved in terms of the content, organization, general writing rules, creative thinking and the overall scores while students' writing motives were improved in terms of writing emotion, writing ability, writing function/utility and overall scores in the classrooms. Students in the experiment group showed greater writing performance in terms of the content, organization, general writing rules, creative thinking, and the overall scores than those in the control group. As to writing motives, significant difference was found in terms of writing emotion, writing function/efficiency and the overall scores.

1. Introduction

Twelve-year compulsory education was lunched recently in Taiwan and one of the highlighted goals is to equip students with multiple intellectual development and interests to find their routes of careers and plans for advanced study (Ministry of Education, 2012). Language is the fundamental part of the 12-year compulsory education because it is considered relevant to the learning efficiency of other subjects (Su, 1992). Furthermore, Tu (1986) argued that writing ability is an adequate index of the level of students' language ability.

As put by Zhang (1992), writing is to express personal opinions in a complete article with correct logic, grammar and punctuation to form sentences and paragraphs. The greatest challenge as faced by elementary teachers to teach writing seems to be that students are afraid of writing or uninterested in writing. Traditional teaching of Chinese writing starts with teachers' announcing the topic, followed by explanation of the topic and main structure, and results with the students' writing as per the instructed way. This way of teaching sets limits to students' imagination and thinking. Given the above, the main reason to explain why students are not interested in writing is the use of dull and un-motivating teaching methods. That is why this present study intends to explore how to motivate students to write by means of appropriate teaching methods (Roy, 2015).

Youth today have a tendency of consuming an unhealthy amount of Internet, TV and smartphones with multimedia effects and sense of entertainment. They are therefore less willing to read books and write articles, and their abilities to read and write have subsequently deteriorated as compared to previous generations. Lee (2010) points out that the convenience of computers and the easy access to information in the Internet can be the main cause to college students' lower degree of Chinese abilities. They only know how to compose fragments of information rather than organizing them into a coherent whole. Since students are exposed to the Internet to a greater extent, teachers are advised to use multimedia information as obtained online to assist with teaching of writing. By guiding students to comprehend the meanings of the given information, students can be encouraged to think about how to write, which is the first research goal. The second goal is to discuss the use of multimedia-assisted teaching of Chinese writing in relation to the improvement of junior high students' writing motives and performance. The third research goal is to explore the use of micro-movies for creatively teaching Chinese writing and its impact on improvement of students' learning attitudes and learning performance as opposed to those receiving traditional teaching of Chinese writing. In sum, the main objectives of this study are:

- To examine the process in which micro-movies are used for teaching junior high school students creative Chinese writing in Taiwan
- To discuss the use of micro-movies and its impact on junior high school students' writing performance and motives in Taiwan
- To compare the use of micro-movies and traditional teaching method and the impact on junior high school students' writing performance and motives.

2. Literature review

2.1. Theories of composition education

Composing articles is not difficult as long as you can think and write words. Composing articles is possible and easy as long as you keep your mind open, read more, think more, practice more. There are a number of theories proposed to describe the process of composing articles. The researchers summarize the views from Chen (1994), Liu (1995), Luo (2005) and Chen (2004) and suggest the process including 8 steps as follows. The eight steps include examining topics, comprehending meaning, brainstorming, selecting information, organizing information, drawing

outlines, composing, and final checking. The above steps support the writing process as put by Spandel (2008), Reid (2000) and Raimes (1998). The above process is criticized because it only highlights writing actions rather than the inner process that concerns the writers' cognition. Flower and Hayes (1981), hence, argued that a writing model takes into account the writing environment, the writer's long-term memory, and the writing process. As to the writing process, it includes planning, transforming, and re-examining. This process is determined by and varies with each individual writers. Given the above, it is known that writing is not a linear process, but a process which integrates the writer's creativity, long-term memory, experiences, physical context, imagination and observation. This complexity in the writing process demands teachers to attempt to offer teaching curriculums that can stimulate students' creative thinking, brainstorming and stronger writing motives. This vein of thinking applies to the research design in this study and therefore, the use of micro-movies is taken into account.

2.2. Information-technology-assisted teaching of Chinese writing

Information technology has been incorporated in teaching curriculums so as to cultivate students with lifelong learning habits and attitudes. Technology and multimedia materials used for teaching include computers and movies, which teachers have used to assist with teaching, rather than using them to satisfy individual students' learning preference. Students can only be passively instructed to watch the content instead of interactively communicate with the teaching resources (Jiang, 2002; Oppenheimer, Zaromb, Pomerantz, Williams, Park, 2017). The researchers of this study reviewed studies with a focus on information technology in relation to teaching of Chinese writing and found that the relevant topics to be studied are improving writing abilities (Ji, 2010; Zhang, 2011), enhancing writing motives (Cai, 2011), and students' satisfaction with the use of technology in teaching curriculums (Wu, 2009; Zhang, 2010; Festas, Oliveira, Rebelo, Damião, Harris, Graham, 2015). Following the research veins as developed in the literature, this study also intends to explore whether the use of micro-movies in teaching curriculums for Chinese wiring can make difference in students' writing performance.

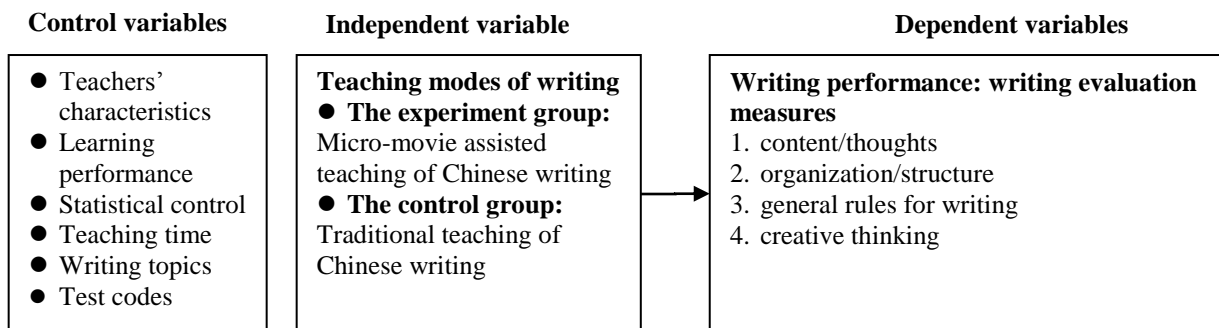## 2.3. Creative Chinese writing

Teaching for creative Chinese writing differs from traditional style of writing in that the originality of children's writings are respected and their motives are stimulated by means of language creativity. Asking children to follow writing principles with clear structures and flows of arguments can be difficult because they will only write composition as expected by adults

rather than reflecting their own creativity (Chen, 2007). Teaching for creative writing has been operated for years. For instance, Smith (1987) argued that writing is the best strategy to develop children's thinking. Writers not only have to compose words, but also incorporate personal experiences and discover meanings in the process of handling words and composing an article. Genesee (1994) characterized writing as a linguistic process in which writers use textual semiosis to construct discourse, and to create meanings. Studies in Taiwan with interest in efficiency of creative writing explored topics such as how to improve students' writing motives (Lu, 2011; Cai, 2009), improving students' writing abilities (Lu, 2011; Wu, 2010), and helping students develop students 'synthetic thinking (Cai, 2009; Wu, 2010). From the above studies, it is known that teaching of creative Chinese writing can lead to better writing motives, abilities and synthetic thinking. However, they tended to focus on action-oriented and picture-based teaching. This study, however, aims to use micro-movies and the visual effects as a means in a quasi-experiment to stimulate students' creative thinking for writing.

3. Methodology

3.1 Research framework

This present study aims to explore the use of micro-movies for teaching junior high school students creative Chinese writing with a focus on its impact on the writing performance. Figure 1 illustrates the overall research framework.

Control variables	**Independent variable**	**Dependent variables**
• Teachers' characteristics • Learning performance • Statistical control • Teaching time • Writing topics • Test codes	**Teaching modes of writing** • **The experiment group:** Micro-movie assisted teaching of Chinese writing • **The control group:** Traditional teaching of Chinese writing	**Writing performance: writing evaluation measures** 1. content/thoughts 2. organization/structure 3. general rules for writing 4. creative thinking

Figure 1: *Research framework*

3.2 Variables

3.2.1. Independent variables are teaching styles for Chinese writing

The experiment group received teaching with the use of micro-movies while the control group received traditional teaching style.

3.2.2 Dependent variables

Writing motives：higher scores of this measure indicate higher writing motives, including higher writing emotions, writing abilities and writing function/efficiency.

Writing performance：higher scores of this measure indicate greater writing performance, defined in terms of content/thoughts, organization/structure, general rules for writing (such as punctuation, appropriate use of words, and fluency), and creative thinking.

3.2.3 Control variables

The teacher who conducted the experiment of teaching on the two groups of participating students is one of the researchers. The levels of the students' learning were controlled to be similar given their scores of the entrance exams. To eliminate the difference between the two groups prior to the experiment, the scores were derived from the writing evaluation measures were used as the covariance. Two groups received the same frequency and amount of teaching. Students of the two groups were asked to write about the same topic. The code assigned to each student's writing outcome was randomly created. When a student's writing was marked, the teacher, who is also one of the researchers, did not have access to any information about the writer, such as the name. Given this, personal bias to students and its influence to the research outcomes can be avoided.

3.3 Research design

This present study employed nonequivalent pretest-posttest quasi-experiment research design. The teaching methods are independent variables. Micro-movie-assisted teaching method was used in the experiment group while the traditional teaching method was employed for the control group. The dependent variables are writing performance. Both groups were given a pretest and posttest based on measures for writing evaluation and measures for writing motives before and after the experiment. Both the experiment and the control groups were further divided into six sub-groups respectively. Each subgroup has 5 to 6 students. The experiment lasted for 16 weeks. The teaching procedures were illustrated in Figure 2.

The experiment group
The micro-movie-assisted teaching method

The operational procedures
1. Briefing of the content in each unit; playing micro-movies; relating the movies to the writing topics
2. Explaining the writing topics and the emotions shown in the movies
3. Group discussion, sharing feeling and giving feedback after the movies
4. Completing the writing tasks based on the feeling experienced in the movies in relation to the writing topics
5. Submitting the writing for evaluation
6. In the next class, replaying the movies again to remind students of the feeling not presented in the writing tasks, followed by feedback to students who will modify their writing works again for another submission

The completion stage
1. Overall evaluation given to the whole class, posting outstanding writing works in the classroom for students' reference
2. Distribution learning feedback sheet to collect students' opinions about the teaching curriculums

The control group
Traditional teaching method

The operational procedures
1. Briefing the content in each unit; revealing the writing topics
2. Explaining the meanings of the topics
3. Outlining the content and planning the structures/paragraphs together by teachers and students
4. Completing the writing tasks
5. Submitting the writing works for evaluation
6. After the marking, returning the works, giving feedbacks followed by students' modification of their own works for resubmission

The completion stage
1. Overall evaluation given to the whole class; posting g outstanding writing works in the classroom for students' reference
2. Students' giving oral or written feedbacks

Figure 2: *Teaching procedures*

3.4 Research participants

The participants in this study are the eighth grade students at a junior high school in Pingtung, Taiwan. They are students from the classes taught by one of the researchers. They were further divided into the experiment group (31 students, 17 males and 14 females) and the control group (29 students, 16 males and 13 females).

3.5 Research instruments

3.5.1 Measures for writing motives

Measures for writing motives were developed by taking into account the measures for writing attitudes by Cai (1995) and Zhou (2002) as well as the measures for writing motives by Wu (2007) and Liu (2007). The above measures were adopted into those suitable for the eighth grade students. Expert consultation was conducted with three scholars as well as three experienced Chinese teachers working at junior high schools for the modification of the

measures and improvement of the validity. The used measures were presented in five-point-Likert scales with dimensions, namely, writing emotions, writing abilities, and writing function/efficiency.

3.5.2 Measures for writing evaluation

Measures for writing evaluations were developed by taking into account those by Zhang (2010), Xu (2007), and Liu (2007) and adapted into those suitable for the eighth grade students. Given that this research focuses on creative Chinese writing, one dimension, that is, creative thinking, was also included in addition to considerations of content/thoughts, organization/structure, and general rules for writing (such as punctuation, appropriate use of words, and fluency). To enhance the objectivity of the scores, each article as composed by each individual student was marked by two teachers who had discussed the measures for writing evaluation and then completed the marking of 60 articles. The scores were tested with product-moment correlations and the results showed correlation levels above 0.7, indicting high correlation between the scores given by the two teachers.

3.5.3 Micro-movies

Micro-movies appropriate for the weekly writing topics in experiments were searched and obtained online. Online resources enabled students to watch at their free time at home and enhanced their writing emotions and impressions about the motives.

3.5.4 Students' feedback on the writing courses

It was developed to elicit information about students' feedbacks on the courses. They were asked to describe what they had learned, their responses to the use of micro-motives, the application to creative writing, and any learning difficulties they had encountered. The information could be used for improvement of the teaching.

3.6 Data analysis

The quantitative data were analyzed with a number of statistic approaches, namely, descriptive statistics, paired-samples t-test, one-sample t-test, analysis of covariance, and Pearson product-moment correlation. The inclusion of quantitative data helped to better understand the use of micro-movies influences students' writing abilities in teaching for creative Chinese writing.

4. Research findings

4.1 Writing performance

4.1.1 The analysis of writing performance

The differences in the scores of writing performance in the pre- and post-experiments tests were examined and compared between the experiment and control group by paired-samples t-tests. In the experiment group, the difference in scores for content/thoughts, organization/structure, general rules for writing, creative thinking and the overall scores of writing performance between the pre- and post-experiment test was significant given the p value was lower than .05. That is to say, in the experiment group, due to the use of micro-movies, the abovementioned aspects of writing performance were significantly improved. As to the control group, significant decrease in scores in the pre- and post-test was found in scores for content/thoughts, and organization/structure (p< .05). No significant improvement could be identified for dimensions, such as general rules for writing, creative thinking and the overall scores in the use of traditional ways of teaching Chinese writing. The comparison of results between the two groups was listed in Table 1.

Table 1: *The comparison of the experiment and control groups in terms of the pre-test and post-test scores of writing performance*

dimensions	Pre- and post-experiment difference in the experiment group	Pre- and post- experiment difference in the control group
Content/thoughts	Significantly increased （M1＝21.44，M2＝21.76）	Significantly decreased （M1＝21.78，M2＝21.44）
Organization/structure	Significantly increased （M1＝21.45，M2＝21.83）	Significantly decreased （M1＝21.98，M2＝21.45）
General rules for writing	Significantly increased （M1＝11.39，M2＝11.89）	Not significant (M1＝11.40，M2＝11.30）
Creative thinking	Significantly increased （M1＝11.18，M2＝11.91）	Not significant （M1＝11.16，M2＝11.05）
Overall scores	Significantly increased （M1＝65.42，M2＝67.15）	Not significant （M1＝65.69，M2＝64.99）

M1(pre-test means)，M2 (post-test means)

As to the comparison between the two groups in terms of writing performance, the within-group regression coefficient homogeneity was tested. As to the difference as examined in the pre-test, p values for the dimensions such as content/thoughts, organization/structure, general rules, creative thinking and the overall scores were respectively .059、.277、.148、.354、.673. The above p values were not significant and analysis of covariance could be conducted. Using the pre-test scores from the measures for writing evaluation as covariance, the corresponding post-test scores as dependent variables, the two groups as independent variables, one-way

ANCOVA was conducted. The results indicated that excluding the inference from the pre-tests, the difference between the two groups reached significant levels (p values under .05) in terms of dimensions, such as content/thoughts, organization/structure, general rules for writing, creative thinking, and overall scores. Furthermore, the means of the experiment group were relatively higher than those of the control group. Table 2 shows the differences in the means between the two groups in terms of the writing performance.

Table 2: *The comparison of writing performance between the two groups*

dimensions	Comparisons between the experiment group (EG) and control group (CG)
Content/thoughts	EG（M＝21.7621）significantly higher than CG（M＝21.4353）
Organization/structure	EG（M＝21.8266）significantly higher than CG（M＝21.4526）
General rules for writing	EG（M＝11.8871）significantly higher than CG（M＝11.2974）
Creative thinking	EG（M＝11.9113）significantly higher than CG（M＝11.0474）
Overall scores	EG（M＝16.8468）significantly higher than CG（M＝16.3082）

4.1.2. Summary

Upon undergoing the experimental treatment, the experiment group showed significant improvement in their writing in terms of various writing performance dimensions, such as content/thoughts, organization/structure, general rules for writing and the overall scores, which indicates that the use of micro-movies for the teaching of creative Chinese writing is helpful.

Given the covariance analysis, differences in scores of content/thoughts, organization/structure, general rules for writing and overall scores were significant. The results suggest that the treatment given in the experiment group caused significant improvement in performance dimensions, such as content/thoughts, organization/structure, general rules for writing, creative thinking and the overall scores, as opposed to traditional ways of teaching writing. The findings were found consistent with those reported in various previous studies (You, 2007; Liao, 2008) where incorporating information technology in teaching activities of Chinese writing can enhance students' writing performance.

4.2 Writing motives

4.2.1 Analysis of writing motives

Paired-samples t-tests were conducted to examine the differences in scores of writing motives as derived from the pre and post-tests in the experiment and the control group. The findings suggested that in the experiment group, the pre- and post-test difference reached the

level of significance given the p values for writing emotion (p=.018), writing abilities (p=.010), writing function/efficiency (p=.043) and the overall scores (p=.000). As to the control group, the pre- and post-test difference reached the level of significance only in terms of writing abilities (p=.028) given the p values for writing emotions (p=.132), writing function/efficiency (p=.469) and the overall scores (p=.590) were higher than .05. The score means of writing motives for the two groups were presented in Table 3.

Table 3: *Comparisons of pre- and post-test scores in the two groups*

Dimensions	Pre- and post-experiment difference in the experiment group	Pre- and post- experiment difference in the control group
Writing emotions	Significantly increased（M1＝94.18，M2＝102.64）	Not significant（M1＝88.45，M2＝85.91）
Writing abilities	Significantly increased（M1＝92.71，M2＝102.43）	Significantly increased（M1＝88.00，M2＝91.43）
Writing function/efficiency	Significantly increased（M1＝105.00，M2＝108.50）	Not significant（M1＝95.63，M2＝94.38）
Overall scores	Significantly increased（M1＝97.12，M2＝104.38）	Not significant（M1＝90.54，M2＝90.00）

M1(pre-test means)，M2 (post-test means)

Regression homogeneity tests were conducted to compare the difference of writing motives between the experiment and the control group. The p values for the between group comparisons of pre-test scores were all higher than .05 for all dimensions, such as writing emotions (p=.527), writing abilities (p=.836), writing function/efficiency (p=.979) and the overall scores (p=.290). Therefore, analysis of covariance could be conducted by taking the pre-test scores of writing motives as the covariance, the post-test scores as dependent variable, 'group' as the independent variable. Significant between-group difference could be found in terms of dimensions, such as writing emotions (p=.002), writing function/efficiency (p=.008) and the overall scores (p=.000) given the p values lower than .05. The details as to the between-group comparisons in terms of writing motives were listed in Table 4.

Table 4: *The between-group comparisons of scores in writing motive measures*

dimensions	comparisons
Writing emotions	The experiment group（M＝100.177）significantly higher than the control group （M＝88.369）
Writing abilities	No significant difference
Writing function/efficiency	The experiment group（M＝104.623）significantly higher than the control group （M＝98.252）

Overall scores	The experiment group（M＝101.586）significantly higher than the control group （M＝92.799）

4.2.2 Summary

Students in the experiment group showed significant improvement in their writing emotions, writing ability, writing function/efficiency as well as the overall scores of writing motives. Therefore, the hypothesis which predicts significant difference in writing motives due to the use of micro-movies for teaching was supported. As to students in the control group, without the use of micro-movies, their writing abilities were significantly decreased.

As to the comparisons between the two groups in terms of writing motives, significant higher scores were found in the experiments group than in the control group in terms of writing emotions, writing function/efficiency and the overall scores. Hence, the hypothesis that predicts significant differences in all dimensions of writing motives between the two groups was partially supported. However, the findings were rather consistent with those reported by Ji (2010), Huang (2010) and You (2007), who all argued that the incorporation of information technology in the teaching activities of Chinese writing can enhance students' writing motives.

4.3. Analysis of the teaching procedures and the reflection

4.3.1 Analysis of the teaching procedures

Eight units of activities were carried out for this research. The first, fourth and eighth units of the teaching content, associated procedures, teachers' feedback and suggestions were presented in Table 5.

4.3.2 Teaching reflections

(1) The difficulty of writing topics should be increased gradually

Students in the experiment group were rather unfamiliar with the creative writing method at the beginning of the experiments. At the second unit of the experiment with the theme "the literature in text messages', students' outcomes were not outstanding and short. This step should have been postponed to the very end of the experiments. In the second unit of the experiment with the theme "I can always remember the taste", the writing task demanded both creativity and the control of words, which was advised to be conducted at the beginning of the teaching experiments.

Table 5: *Teaching process analysis*

No.	strategies	Teaching content	Teacher comments	Reflection/feedback
The first time: OO's QQ	Applying analogy and metaphor	The use of micro-movies for the first time: choosing themes that students can feel emotionally identified with, such as those related to family, including dishes made by grandmother, mother's courage, father's white canvas shoes to activate students' writing motives and allowing them to imagine and infer for the creation of writing topics. The merit is to draw students to familiar experiences and emotions related to the family.	**Experiment group** 1.smooth description with beautifully written words 2. Natural revealing of emotions in the last paragraph regarding the contrast of students' growing into adults as opposed to their grandmothers' decrement due to ageing. The emotions were characterized with great sentiments and regrets resembling the nostalgic writing style adopted by a famous novelist, called Qi-Jun. **Control group** 1. the scope of topics is too narrow: most of the writing topics were relevant to those given by the researcher 2. Smaller word counts：approximately 400 words were produced by the experiment group while those by the control group were fewer than 400. The structure of the writing was not clear and the expressed emotions were not strong.	1.When playing micro-movies for the first time, students were excited and interested so they asked for more. The focus should turn to the writing tasks rather than the playing of movies. 2. After playing the movie, learning instruction sheets were distributed to explain how to compose articles. 3. Group discussions were introduced in class, but students lacked relevant experiences so further instructions were advised to give at appropriate points of time, for example, by raising topics for students to discuss.
The fourth time：The bell of four seasons	Stimulating brainstorming	To match the article "A bell with sounds" in the textbook, a writing topic called 'Bell of the four seasons' was assigned to students to write about by having them to practice the observation of the sceneries, climate, and representative events about the four seasons. Some micro-movies were played to trigger students' memories about seasons. Movies were named as 'The cherry tree', 'Spring, the pleasantness', 'What is summer', 'Late, Autumn", and 'a small trip in the winter'.	**The experiment group** 1.refined use of words and beautifully put expressions to successfully portray the sceneries of autumn and winter 2. Lively description of natural sceneries with rich disclosure of emotions。 **The control group** 1. rather ordinary descriptions of autumn and winter 2. Without proper inspiration, the quality of the writing outcomes appeared to be rather compromised. Few students' expressions were not elaborated enough.	1.the chosen micro-movies portrayed the four seasons and the sceneries. However, they were not as attractive as previous ones as played for the experiment. Teachers were advised to give more instructions to students as to how to express in words about four seasons. 2. Students might lack abilities to use words. Teachers are advised to provide templates or good writing samples for students to mimic or have more inspirations.
The eighth time：	Fostering inspiring/creative	After playing two movies about Doraemon (a Japanese animation character), students were asked to create a device that could be used by	**The experiment group** 1. The used tool was very creative. The novel was very descriptive, imply the importance of persistence, and hence, very inspiring. 2. The ending was full of emotions,	1. The writing task was slightly difficult due to the requirement of producing a device for the creation of a story. But, since the animation

Doraemon and imagined a story about the use of the device. After conducting seven rounds of experiments, students' creativity and abilities to use words were increased. The topic assigned for students to write was to activate their imagination for the creation of a story about Doraemon. The goal of the teaching was to enhance their creativity, imagination and power of description.	triggered by the friendship between Doraemon who usually took care of his mater but not was taken care of by him due to illness. **The control group** 1. the descriptions were too plain and the content was not eye-catching and lack of sense of humor. Some plots were not elaborated enough to interest readers. 2. the creation of a device was a creative idea but it was not well employed. 3. the ending was too plain without dramatic turning points. Even though the story was well planned, the readability was not great.	character, Doraemon, was fully known by the students, the difficulty could be mitigated. 2. students' demonstration of creativity and abilities to create stories was considered adequate. 3. Few students in the experiment group came across difficulties in producing a unique device, which hindered them from proceeding to write. Teachers should provide instruction to inspire them for writing given that writing should prioritize the creation of the device.

(2) Students' creativity was unexpectedly good

The writing performances demonstrated by students in the experiment group were overwhelmingly outstanding given their good control of writing techniques as inspired by the movies. Those performing worse also showed increase in practicing imagination and creativity. For future improvements, incorporation of better choices of micro-movies are advised to match students with worse writing performances. Appropriate degrees of assistance should also be given to them to help them improve their writing.

(3) Students' interest in learning how to write increased

Due to the use of micro-movies, students in the experiment group showed pleasure in the process of writing and their interest in writing as well as the performance were enhanced. The results indicate that the use of micro-movies for teaching writing was useful and helpful.

4.4 Learning feedbacks from the students

Students were given a learning feedback sheet to express their opinions regarding the experiments. The feedbacks were summarized as follows:

The use of micro-movies, as opposed to traditional teaching curriculums, could make students more motivated to write, to improve their techniques, and to be more involved in cooperative group discussion. Their learning activities were more intriguing and hence, they could enjoy writing classes to a greater extent. Positive feedbacks could be observed in the

questionnaire surveys as well. They, therefore, expressed their preference in using micro-movies for writing practices.

The questionnaire survey also suggested students' preferences in content of the movies. They preferred the movies with storylines including great dramatic tension and turning points. They did not appreciate the movies with simple storylines characterized by low dramatic tension and intensive preaching messages. It is advised that the choices of movies should mainly be in line with the writing topics and then students' preferences.

In terms of the use of writing strategies, students were familiar with the approach of exploring and brainstorming while least familiar with practicing creativity and imagination. Students generally considered the writing topics as assigned in the teaching experiments with the use of micro-movies rather difficult. They were also easily manipulated by the storylines, came across writing limitations as derived from the unavailability of the equipment and the interference from other classmates' chatting in class.

4.5 Post-experiment modification of teaching methods

4.5.1 The preparation stage

The key to activate students' motives to write is the topics which should engage students' lives, be refreshing and interesting. It is hence not easy to find micro-movies which are relevant to the writing topics while also inspiring and appealing enough to attract students and trigger their thinking. Choosing micro-movies appropriately is essential if teachers attempt to successfully motivate students to write.

4.5.2 The teaching stage

Students with greater expressive abilities were assigned to each group as leaders who lead the group discussion. The sequence of writing topics was determined by the degree of difficulty. After completing the marking of students' writing, teachers would show some works in the next class for everybody to discuss, modify the content, practice imagination, and refine expressions in the whole-class brainstorming activities.

4.5.3 The completion stage

All the data derived from the experiments, including the discussion, feedback and interview transcripts were documented and placed in class for students' reference, helping them to learn more.

5. Conclusions and suggestions

5.1. Conclusions

5.1.1 Given the pre- and post- experiment comparisons, students' writing performance were found significantly improved in the class using micro-movies for teaching how to write.

Micro-movies has the ability to stimulate students' writing motives and help cultivate their writing skills. In the group discussion, students could observe other students' works, learn how to organize their content and develop good structures in their writing. The developed writing topics were more diverse and allow students to practice their imagination and creativity.

5.1.2 Students in the experiment group showed greater writing performance as opposed to those in the control group.

Students in the experiment group demonstrated deeper emotions in the writing and had better control of the topics. Students writing techniques were cultivated by means of group discussion, intensive teacher-student interactions. The improved writing skills were realized in the better writing organization, better paragraph arrangements, and reduced violation of general writing rules. As opposed to students taught with traditional teaching methods in the control group, students in the experiment group showed better writing abilities.

5.1.3 Students in the experiment group showed greater writing motives as opposed to those in the control group.

Students in the experiment group demonstrated deeper emotions in the writing and had better control of the topics. Students writing techniques were cultivated by means of group discussion, intensive teacher-student interactions. The improved writing skills were realized in the better writing organization, better paragraph arrangements, and reduced violation of general writing rules. As opposed to students taught with traditional teaching methods in the control group, students in the experiment group showed better writing abilities.

5.2. Suggestions

5.2.1 Suggestions for teaching of writing

It is advised to teach other genres, such as poetry, fables, paraphrases of pop song lyrics, and poetry to train students how to think and write creatively. The use of micro-movies for teaching should be applied to more classes to promote this teaching method. Other forms of

media are also advised for teachers to consider, such as digitalized multi-media teaching materials. In order to enhance the efficiency of group discussions, it is advised that peer interaction should be increased students with greater writing abilities can help those with poorer writing skills. It is also suggested that teachers from different disciplines can form a cross-disciplinary group to help reduce each other's teaching burden in the attempt to introducing more creativity in their teaching curriculums. In term of panning the amount of writing tasks for students to complete, it is advised that students can be instructed to write about other kinds of genres, such as texting literature or poems, which can reduce students' stress to write while also improving their creative writing abilities.

5.2.2 Suggestions for future research

Future research can explore whether writing motives and writing performance can be associated with age, student numbers and place of origins. It might also be worthwhile to examine how experiments influence students who have different levels of writing abilities in terms of the changes in their writing performance and motives. Future research can take into account other forms of creative writing and observe how the associate teaching influences students. The diversity in the content of the used micro-movies can also be enhanced in the future. Additional variables can be included when discussing the impact of the experiments on students' writing, for instance, students' intellectual level, reading abilities, family background, gender, and learning environments.

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