Evaluation on

"Quality Thematic Network (QTN) on Drama in Education"
The Second Report (2009-2010)

Submitted by

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To

Ming Ri Institute of Arts Education

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This second year report evaluated the effect of drama education on students and teachers from kindergartens, primary schools and a special school who had taken part in the project entitled “Quality Thematic Network (QTN) on Drama in Education” (QEF) from Sept. 2009 to July 2010. Special thanks are due to the participating schools and the student research assistants taking part in the study. All correspondence of the report should be addressed to Dr. Anna Hui, Dept. of Applied Social Studies, City University of Hong Kong, Tat Chee Avenue, Kowloon or annahui@cityu.edu.hk.

Abstract

In Hong Kong's recent curriculum reform, creativity has been identified as a generic skill to be nurtured in our students of all levels in the key learning areas, including arts education. The present study evaluated the effects of a drama in education project on both students and teachers. Teachers from kindergarten, primary and special schools took part in a 12-hour teacher training program on drama in education. Teachers also received support in lesson planning on drama enhanced learning to the classes they were teaching. Students were randomly drawn from these classes to form the experimental group (85 kindergarten students; 78 primary school students; 16 special learners) whereas students from the same schools but were not taught by these teachers took part in the study as the control group (35 kindergarten students, 65 primary students, 22 special learners). In the questionnaire, 1416 primary school students from the schools took part in it. A total of 124 kindergarten teachers, and school teachers from primary and special schools completed both the pretest and posttest. Significant differences were found in the teacher-perceived dramatic and creativity characteristics in the experimental group of kindergarten students. Primary students in the drama training also reported significant gains in dramatic, creativity and communicative characteristics. Special learners also displayed more added more creativity characteristics. Significant positive effects were also found in the creative fostering teaching technique of all groups of teachers involved in the training. They encouraged their students to become independent and cooperative learners. They suspended their judgment and provided students with try out opportunities. They also indicated that drama strategies were effective in classroom instruction and enhanced their professional efficacy as competent teachers. Limitations and future directions were discussed.

中文摘要

創造力是近年教育改革下所提倡的一項共通能力，建議在各個的學習領域中，包括：藝術教育，培訓各級學生的創造力。本研究評估了戲劇教育培訓，對學生及教師的成效。幼稚園、小學及特殊學校教師透過十二小時的戲劇教育教師培訓，然而和戲劇教育導師一起策劃以戲劇輔助教學的課程設計，並且進行試教。實驗組的學生，共 85 位幼稚園學生、78 位小學生及 16 位特殊學生隨機從參與培訓計畫的老師任教班級中抽出，而控制組的學生，有 35 位幼稚園學生、65 位小學生及 22 位特殊學生則由其他老師的同級不同班中隨機抽出。另外有 1416 位小學生參加問卷調查。教師組則有 124 位幼稚園、小學及特殊學校老師參與，並且完成前、後測的問卷。結果顯示實驗組的學生，經過戲劇教學後，幼稚園老師觀察他們的戲劇及創意特質較控制組的學生明顯地高。參與戲劇培訓的小學生則在戲劇、創意及溝通特質方面，較控制組學生有更好表現。實驗組的特殊學生比控制組的學生，在創意特質方面更有進步。至於教師方面，戲劇教育培訓能有效提升幼稚園、小學及特殊學校教師的創意教學風格。教師更懂得鼓勵學生獨立和合作地學習，他們願意延後作判斷和提供嘗試的機會。這些教師亦表示戲劇教育的訓練能提升他們的課室管理和有助作專業發展。研究的限制和未來方向亦會討論。

1. Introduction

An emphasis by policy makers on creativity in education has been recorded in many societies around the world, including some Asian societies, namely China, Hong Kong, Singapore, and Taiwan. Creativity has been a recent focus of educational reforms in these Asian Chinese societies. The overwhelming popularity of creativity development in these contemporary Chinese societies appears both to reflect an awareness of the importance of creativity and to recognize the positive effects that creativity education can have on children. Creativity is promoted in teaching and learning at schools as a necessity for all in Australian schools (Lassig, 2009). Creativity has been encouraged in the domains of science and technology in higher education in China (Ministry of Education of the People's Republic of China, 1998). In Hong Kong, creativity has been identified as one of the nine generic skills to be nurtured and defined as a behavior that is "the result of a complex of cognitive skills/abilities, personality factors, motivation, strategies, and metacognitive skills" (Curriculum Development Council, HKSAR, 2002, p.45). Creativity is viewed as a desired learning outcome in Singaporean primary and secondary schools and closely related to "enterprising" in the creative economy (National Arts Council, Singapore, 2008). An official white paper on Creative education: Establishing a Republic of Creativity for Taiwan was published in 2003. A multi-level approach to fostering

creativity at the individual, school, societal, industrial and cultural levels is adopted.

In Hong Kong, arts education "contributes significantly to students' aesthetic development (Curriculum Development Council, HKSAR, 2002)" and is one of the five essential areas, ethics, intellect, physique, social skills and aesthetics, in the overall aim of education set out by the Education Commission (Education Bureau, HKSAR, 2007). More specifically, the learning targets of arts education are to help students, first, developing their creativity and imagination. Second, helps developing skills to explore. Third, helps cultivating critical responses to arts issues. Forth, helps understanding arts in cultural contexts. These 4 learning targets are believed to be inextricably intertwined and should be developed simultaneously. Teachers are suggested to base these four learning targets on students' backgrounds, interests and needs in order to have effective learning, teaching and assessment. Students are believed to have the skills, knowledge and positive attitudes towards the arts developed under this art curriculum (Curriculum Development Council, HKSAR, 2002).

More than a hundred of experimental studies tried to prove the existence of a relationship between drama education and academic variables over the past three decades. All of the studies held a common theme, believing that dram education can improve students' ability in other academic areas, such as achievement, oral, reading, as well as writing skills (Podlozny, 2000). This study aimed at trying to investigate in the effect of learning through drama on students' creativity and communication skills. Teachers' feedback on the implementation of drama in education as creative practices and creativity fostering teaching style were also addressed in the study.

1.1 Learning through Drama

Arts Education is a broad subject includes visual arts, dance, music, and drama, etc. Drama can stand on its' own as a subject, but more often, it falls into one or several modules in the school curriculum of integrated arts. Drama can also be used to assist the learning of various academic subjects such as languages and mathematics. By incorporating drama strategies into the teaching and learning of these subjects, creativity was found to have enhanced and learning motivation was found to have increased. An example is the use of gesture to express abstract words in learning a second language. This kind of practice is called "learning through drama". This was the teaching strategy that was examined in this study.

1.2 Effect of drama education on students

As mentioned above, many studies aimed to examine the benefits of drama education although some have not reported great impact. In the meta-analysis conducted by Podlozny (2000), drama education was effective in raising students' reading achievement as well as oral language. Although the results were not statistically significant, vocabulary was found to have improved. In another study conducted by Duatepe-Paksu and Ubuz (2009), it was found that instruction that was delivered in the form of drama increased achievement and attitudes of students in geometry learning. This improvement was found to be unaffected neither by gender

nor by students' attitudes in the past. However, Winner and Cooper (2000) did not have a conclusive finding that arts study had a causal link to academic achievement, such as verbal and mathematical scores.

Some other demographic variables, such as the age and types of students, were also important concerns in the studies of drama education. Kardash and Wright (1986) found that younger but not older children, typical instead of special students, benefited more as indicated by the stronger relationship between drama education and the varied outcomes measured in the studies. Also, it was found that as the time of drama instruction increased, the strength of the relationship also increased. This result was supported by another study conducted by Conard (1992).

The most encouraging finding of these studies was the transfer of benefit of drama education to other academic domains. Students were not only trained to be better in handling texts or stories they had encountered or enacted before, they also out-perform their non-drama peers on new materials that they have never encountered before (Podlozny, 2000). As early as 1986, Kardash and Wright also noticed the transfer effect. They reported in their meta-analysis study that drama education was not only positively related to reading and oral ability, but also to moral reasoning and self-esteem. This adds value to the study of drama education, due to many of its latent benefits. It is believed that besides the known direct benefits on academic domains

and indirect benefits, such as creativity and communication skills, more benefits of drama education could be found through carefully-designed studies.

1.3 Other benefits of drama education

The training that students receive in the process of learning through drama is not only beneficial for their learning, it is also found to be beneficial in the development of characteristics in human kind. Drama training often encourages students in trying to understand the inner thoughts of characters. This may help students to develop thinking in another perspective (Goldstein, 2009). In the acting process, empathy was also found to have enhanced. Empathy here is defined as the ability to feel another's feelings (Bryant, 1982). Nettle (2006) found supportive evidence. It was also found that professional actors scored higher in the Empathy Quotient (Baron-Cohen & Wheelwright, 2004), which was used to measure affective empathy, than the control group. And in drama training, actors were trained to control their emotions. This ability was coined as emotion regulation in the field of psychology (Gross, 2002). In sum, drama training is believed to enhance learners' perspective taking, empathy and emotion regulation ability, which are exactly traits that our spoiled younger generation lacks. Nevertheless, insignificant findings were found in other studies, such as Freeman, Sullivan and Fulton (2003). They could not have significant improvements in self-concept, problem behavior and social skills of Grade 3 and 4

students after taking part in a 18-week creative drama activity.

Moga, Burger, Hetland and Winner (2000) conducted a meta-analysis on whether studying the arts engendered creative thinking. In the 10 correlational studies with a total sample size of 1513, a large effect size (r = .27) was found but the range was wide, from r = .09 to r = .43. A clear association was shown between studying the arts and performance on creativity measures. However, a smaller effect size (r = .05) was recorded in experimental studies with verbal creativity outcomes and a modest effect size (r = .19) with figural creativity outcomes. They concluded that positive association was found between arts education and creativity and more experimental studies were required to prove its causal relationship.

1.4 Drama activities for special learners

Like students from mainstream schools, it is important for special learners to enhance their sense of selves through expressing oneself (Roy, 2007). Through drama activities, students with special needs can gain self-esteem and improve communication skills (Jindal-Snape & Vettraino, 2007). Students can learn how to participate in imaginative-play and learn social skills through such activities. Drama can be used in empowering students and helping them develop self-advocacy, differing from traditional teaching methods. Special learners can learn about the social world and acquire appropriate emotional responses for social interactions through

drama education.

1.5 Teachers' role in drama education

Whilst the benefits of learning through drama for students were examined a lot, little has been done with the possible benefit that teacher would gain, or the difficulties they encountered during the implementation of this creative form of teaching. According to the curriculum guide of Arts Education of Hong Kong (Curriculum Development Council, 2002), teachers were responsible for students' development of creativity, critical thinking and communication skills through the teaching of art subjects. It is teachers' responsibility to make drama an interesting subject (Kitson & Spiby, 1997).While giving lesson on drama, teacher also bears a role as a performer. It is not an easy job, as Biggs (1999) had stated, the most demanding scene for an actor is those when it requires them to act alone. It adds challenges to the job when students' creativity response has to be encouraged, but on the other hand the order of the classroom could not be sacrificed.

The place of teacher in the development of students' creativity should not be questioned (Gardner, 1993). In the study conducted by Kampylis, Berki & Saariluoma (2009), majority of both in-service and prospective teachers agreed that teachers play a role in enhancing students' creativity. However, they also felt that they were not

well-prepared and confident enough in achieving this. This was coherent with the finding of Torrance and Safter (1986) in which the author stated that the teachers were "ill-equipped" in facilitating students' creativity expression. On the other study, teachers were found to value creativity on one hand, but not preferred the personality traits that often come along with creativity, which includes impulsiveness, risk taking behavior and independence of students, as revealed in teachers' self-report (Westby and Dawson , 1995). Study conducted by Fryer and Collings (1991) which involved about one thousand teachers and lecturers from England and Wales also found that the participants had diverse perception of creativity. These all maybe attributed to the little education about creativity that teachers received while they were still students (Mack, 1987). More recently, Davies, Howe, Fasciato, and Rogers (2004) expressed the same view that teachers have a confined and stereotypic view of creativity and agreed that the attention given to creativity in teachers' education was not enough.

The discrepancy between teachers' concept and actual behavior may lead to "*inhibiting practices"* (Alencar, 2002) which may be exhibited as stressing on the correct response, overly emphasizing on the reproduction of knowledge, underestimating students' creative potential, stressing the importance of obedience and passivity, devaluing fantasy and imagination. But it is believed that as teachers gain experience in drama teaching, these inhibiting practices will be eliminated.

The difficulties encountered definitely could not be solved alone by teachers. It requires the cooperation of many parties including school administrative, educators, government, and psychologists etc. But once the difficulties were being noticed, it is one more step closer to its solution. And the benefit for teachers should not be neglected. By incorporating dram into their teaching, it is believed that teacher-student relationship could be enhanced, due to the increased amount of communication between them. And drama is a good way to bring daily experience into classroom for teacher to give lively lesson. After all, teachers may take this chance to go through self-reflection with students and increase their own self-understanding.

Drama enhanced curriculum is an effective strategy to foster creativity in students. Morgan and Saxton (2001) explained that the approach of learning and teaching through drama would enhance students' reflective and adaptive skills and enable them to look into the problem from multiple dimensions. Drama education adopts an innovative approach to learning from a child-centered perspective (Bolton, 2001). Speech and drama specialists work together through the curriculum to improve communication and problem solving skills through creating drama.

2. Methodology

2.1 Participants

The study included 10 kindergartens and 10 primary schools that participated voluntarily in the drama project. The teachers received a drama training program for 24 hours and another 10 hours on-site coach supervision by a drama educator in designing a lesson enhanced with drama for their students. The teacher sample included a total of 308 teachers in the pre-test including 98 kindergarten teachers, 198 primary school teachers, and 12 special school teachers; and a total of 126 in the post test including 21 kindergarten teachers, 94 primary school teachers, and 11 special school teachers. The student sample consisted of 150 kindergarten students in the pre-test and 131 in the post test, 1639 primary school students in the pre-test and 1416 in the post test, and 39 special school students in the pre-test and 40 in the post test. Within the student sample, 144 kindergarten students in the pre-test and 125 in the post test, and 227 primary school students in the pre-test and 152 in the post test were randomly selected from the schools to participate in the story-telling test (STT) and all of the 40 special school students were invited to participate in the STT.

This second year report included kindergarten students who had completed the pre-test in Oct. or Nov. 2009 (n = 144) and the post-test in May and June 2010 (n = 125). The teacher participants, from both kindergartens and primary schools, completed the pre-test in Oct. or Nov. 2009 (n = 296) and the post-test in May and June 2010 (n = 105). Of the selected 10 kindergartens, 91 were assigned to the

experimental group, and 40 to the control group. In the 10 primary schools, 760 were randomly drawn in the experimental classes and 723 randomly from the control classes. In the special school, 17 students were randomly drawn in the experimental classes and 23 from the control classes. A total of 115 kindergarten and primary school teachers completed both the pretest and the posttest. Among the teachers in experimental classes, a total of 11 teachers (6 teachers from 2 preschools and 5 teachers from 1 primary school) were further invited to take part in focus group interviews.

2.2 Instruments

2.2.1 Students

Items adopted from Renzulli, Smith, White, Callahan and Hartmann (1976) Scales for Rating the Behavioral Characteristics of Superior Students, were used to access students' 1) Dramatics characteristics; and 2) Creativity characteristics. There were 10 items in each part Items were rated using a 6-point Likert-scale (from 1 = never to 6 = always). The questionnaire was administrated twice to compare the pre- and post-test score. For kindergarten students, teachers were responsible for filling in the form for the students based on the classroom observation of child's behavior. And only the first two parts, Dramatics characteristics and Creativity were assessed in kindergarten students by their teachers. For primary students, 2 additional subscales

were included, namely Communication characteristics (11 items) by Renzulli et al (1976), and Motivation for drama education compiled by the first author. The primary students filled in the questionnaire by themselves. Dramatics characteristic was measured by items such as “Volunteers to participate in classroom plays or skits”; Creativity was measured by items such as “Demonstrates imaginative thinking ability”; Communication skills was measured by items such as “Speaks and writes directly and to the point”; and Motivation for drama education was measured by items such as “Talks to my parents about what I have in drama enhanced class”. The reliability of the subscales as indicated by the Cronbach’s alpha were .93 and .96 in pre-test and .94 and .96 in post-test of Dramatics characteristic and Creativity respectively for kindergarten students; for primary students, the Cronbach’s Alpha were .90, .88, .95 and .96 in pre-test and .92, .91, .96, and .96 in the post test of Dramatics characteristic, Creativity, Communication skills and Motivation respectively. As for special school students, the Cronbach’s Alpha were .97 and .90 in pre-test and .97 and .91 in the post-test of Dramatics and Creativity characteristic and Positive emotional responses respectively.

2.2.2 Teachers

In measuring the effect of drama education on teachers, items adopted from Soh’s (2000) study were used. There were 45 items and every five items form a

subscale. There were 9 subscales in total which were: 1) Independent learning; 2) Cooperative learning; 3) Motivation in mastery of knowledge; 4) Suspended judgment; 5) Flexibility in thinking; 6) Self-evaluation; 7) Building on student's idea; 8) Opportunities for trial and 9) Positive coping with frustration. Items were rated in a 6-point Likert-scale (from 1 = never to 6 = always). And the questionnaire was administrated twice to give pre- and post-test scores. Example of items in subscale 1) Independent learning included "Encourage students to show what they have learned on their own"; and in 2) Cooperative learning included "Students have opportunities to share ideas and views"; and in 3) Motivation in mastery of knowledge included "Learning the basic knowledge/skills well is emphasized"; and in 4) Suspended judgment included "Get students to explore their ideas before taking a stand"; and in 5) Flexibility in thinking included "Probe students' ideas to encourage thinking"; and in 6) Self-evaluation included "Expect students to check their own work"; and in 7) Building on student's idea included "Follow up on students' suggestions"; and in 8) Opportunities for trial included "Encourage students to try out what they have learned" and in 9) Positive coping with frustration included "Students who are frustrated can come for emotional support". The reliability of the scales as indicated by Cronbach's Alpha were .85, .78, .72, .86, .81, .77, .82, .84 and .90 for pre-test and .91, .78, .72, .84, .86, .82, .84, .87 and .90 for post-test for the nine subscales for

kindergarten teachers; and .84, .80, .71, .79, .82, .73, .83, .82, and .86 for pre-test and .85, .76, .66, .82, .78, .75, .86, .83, and.87 for post-test for the nine subscales for primary school and special school teachers.

In measuring teachers' rated student motivation for arts education, 15 items were developed by the researcher in the present study. A sample item included "students tell parents about what happen in the drama in education class". Teachers responded in a 6-point Likert scale (1 = not at all; 6 = always). The reliability of the scales as indicated by Cronbach's Alpha were .94 for pre-test and .94 for post-test for kindergarten teachers and .87 for pre-test and .98 for post-test for primary and special school teachers.

And in the last part of the teacher's questionnaire, some basic demographic information was obtained. Name was used for pre- and post-test matching. Teacher's experience in general teaching and drama teaching was asked in two questions respectively. And the post they were taking at school was also under concern. They also indicated the type of school that they were working at.

2.3 Procedure

Teachers in the experimental groups participated in a 12-hour drama training course provided by Ming Ri Institute for Arts Education, and were given training on ways to incorporate drama into their lessons. Other teachers in the schools received 6

hours of basic training on drama in education. Teachers in the experimental group also received a10-hour on-site coach supervision from a drama educator provided by the Institute. They were required to design and deliver 3 teaching units of drama enhanced curriculum in their classrooms but others teachers did not have such requirements. Students taught by teachers in the experimental groups thus were able to have their lessons with dramatic elements while students taught by teachers in the control group might have lessons in the regular way.

The pre-test was conducted within the first two weeks after teachers received training in incorporating drama into their lessons. Teachers and students of both the experimental and control groups in primary schools took part in filling out questionnaires before students were given classes with the dramatic element. Selected students also participated in the story-telling test (STT) (Hui & Lau, 2006). The post-test was conducted with similar procedures 6 months after the pre-test was conducted.

The STT was conducted by a trained research assistant who disguised herself or himself as a volunteer from an organization called “The Story Kingdom”. Each student was presented with an unseen picture and was asked to tell a story about the picture. No time limit was set and the student was asked if he or she wanted to add a title to the story in the end. Two different pictures were used separately for the pre-test

and post-test. Specifically, the whole story-telling scene was first video-taped and the performance was then evaluated by two raters independently in accordance to 10 criteria, of which the first 9 criteria are the same for kindergarten and primary school students: relevancy to the story, ability to describe the story, ability to organize the story, ability to express, ability to show emotions and speak in an audible tone, ability to add in conversations, ability to include humorous elements, ability to include creative elements, and ability to identify problems and find relevant solutions. For the last criterion, kindergarten students were assessed on whether they were able to give a relevant name to their story, and primary school students were assessed on whether appropriate vocabularies were used. Each criterion was rated on a four-point scale (from 1, lowest, to 4, highest). A mean score was calculated for all the criteria for further data analysis.

3. Results

3.1 Effects of drama in education on students from a special school

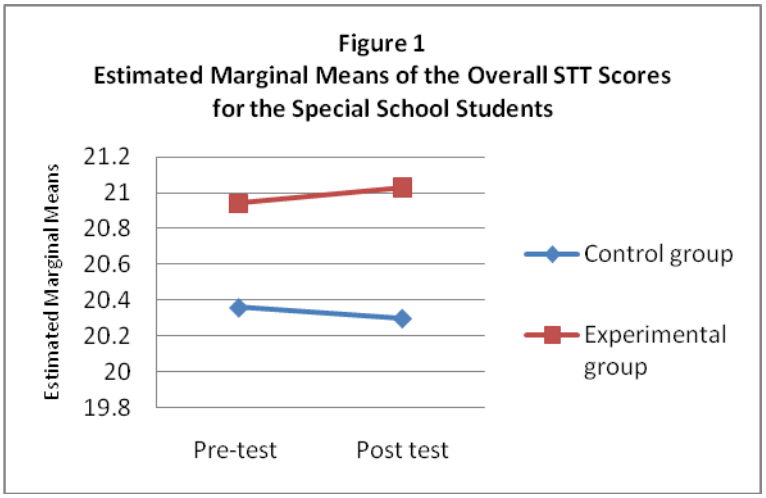
Two-factor repeated ANOVAs were conducted to examine the main testing effect, i.e. the pre-test and post-test, the main grouping effect, i.e. the experimental and control groups, and the interaction between the above two treatment conditions on all of the measuring variables in the current study.

3.1.1 Overall STT Scores of Students with Special Needs

The two-factor repeated ANOVA showed that no significant difference was found on either the main effect of the testing condition, F (1, 36) = .00, p = .985, partial η^2 = .00; the main effect of the grouping condition, F (1, 36) = .65, p = .424, partial η^2 = .00; or the interaction effect between the former two factors, F (1, 36) = .01, p = .908, partial η^2 = .00, as shown in Figure 1. Table 1 presents the means and standard deviations for all treatment conditions of the overall STT scores.

Table 1
Mean special school students' overall STT scores for each treatment condition.

		Test	
		Pre-test (n = 38)	Post-test (n = 38)
Group	Control (n = 22)	M = 20.36 SD = 2.93	M = 20.30 SD = 4.75
	Experimental (n = 16)	M = 20.94 SD = 1.48	M = 21.03 SD = 2.25



3.1.2 Individual STT items of Students with Special Needs

3.1.2.1 Main effect for the testing (pre- and post-test) condition

Significant main effects for the pre-test and post-test were found on items

"Clarity of speech", F (1, 35) = 18.73, p < .001, partial η^2 = .35; "Naming for story", F = 24.06, p < .001, partial η^2 = .41; "Voice audibility", F = 63.72, p <.001, partial η^2 = .65; and "Creative elements", F = 13.30, p < .01, partial η^2 = .28, as shown in Figures 2, 3, 4 and 5. Table 2 presents the means and standard deviations for these items in each of the treatment condition.

Table 2
Special school students' means of the individual STT items with a significant testing effect.

		Test	
		Pre-test (n = 37)	Post-test (n = 78)
Group	Control (n = 22)	Clarity of Speech M = 2.77, SD = .75 Naming for Story M = 2.45, SD = .80 Voice Audibility M = 1.91, SD = .92 **Creative Elements** M = 1.86, SD = .89	Clarity of Speech M = 3.25, SD = .55 Naming for Story M = 1.86, SD = .80 Voice Audibility M = 3.09, SD = .50 **Creative Elements** M = 1.68, SD = .80
	Experimental (n = 15)	Clarity of Speech M = 2.80, SD = .56 Naming for Story M = 2.33, SD = .61 Voice Audibility M = 1.80, SD = .68 **Creative Elements** M = 2.53, SD = .83	Clarity of Speech M = 3.40, SD = .21 Naming for Story M = 1.60, SD = .54 Voice Audibility M = 3.10, SD = .51 **Creative Elements** M = 1.53, SD = .35

Note. Items with a significant interaction effect between the treatment conditions are shown in boldface.

Figure 2
Estimated Marginal Means of Clarity of Speech for the Special School Students

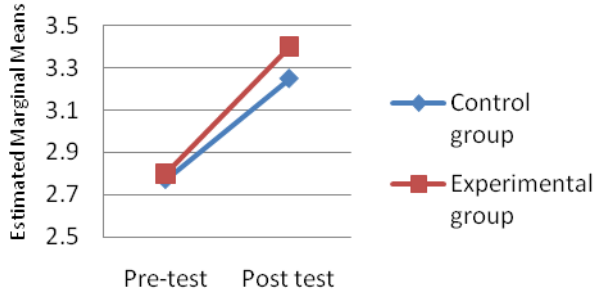


Figure 3
Estimated Marginal Means of Naming for Story for the Special School Students

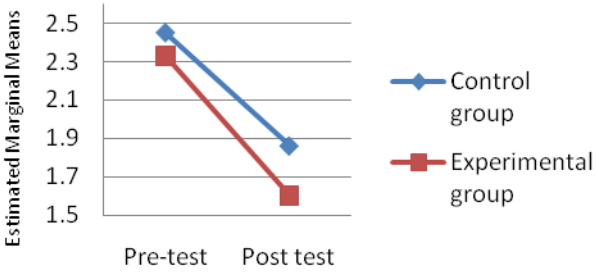


Figure 4
Estimated Marginal Means of Voice Audibility for the Special School Students

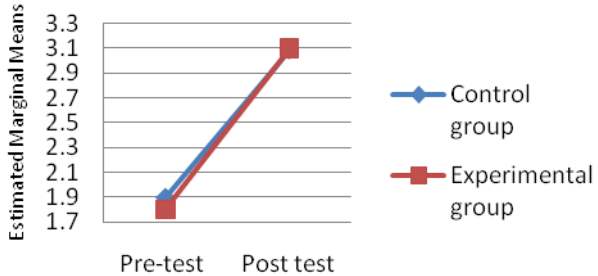
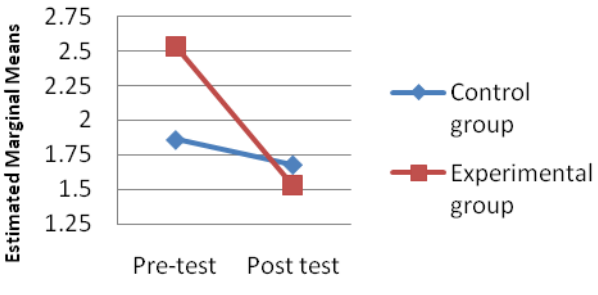


Figure 5
Estimated Marginal Means of Creative Elements for the Special School Students

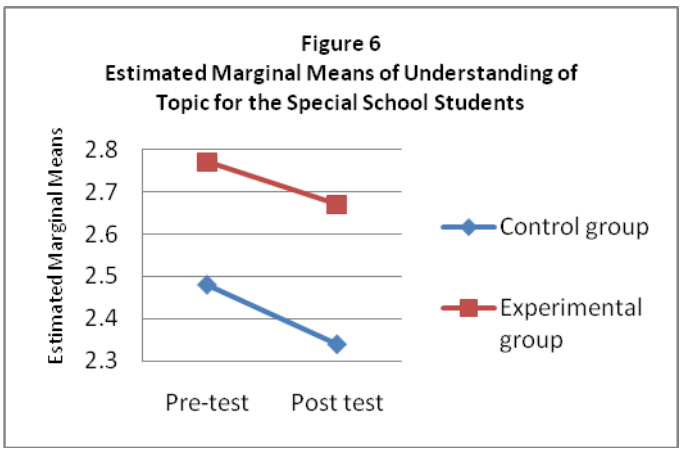


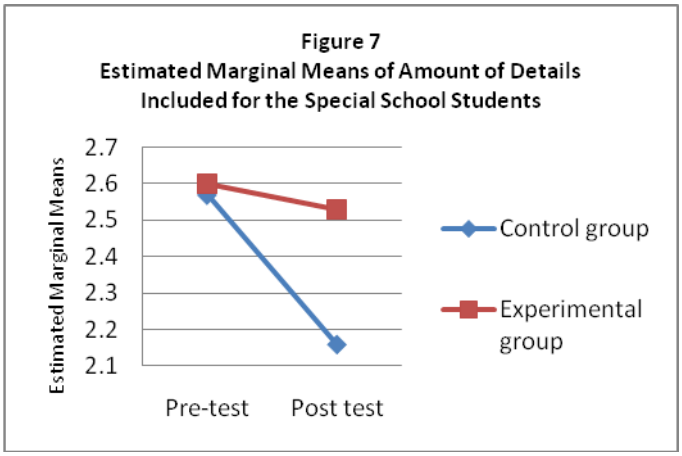
3.1.2.2 Main effect for the grouping (experimental and control) condition

A significant main effect for the control and experimental groups was found on "Understanding of topic", $F = 5.57$, $p < .05$, partial $\eta^2 = .14$, as shown in Figure 6; and a marginal significant main effect for the grouping condition was found on "Amount of details included", $F = 4.09$, $p = .051$, partial $\eta^2 = .11$, as shown in Figure 7. Table 3 presents the means and standard deviations for these two items in each experimental condition.

Table 3
Special school students' means of the individual STT items with a significant grouping effect.

		Test	
		Pre-test (n = 37)	Post-test (n = 37)
Group	Control (n = 22)	Understanding of Topic M = 2.47, SD = .55 Amount of details included M = 2.57, SD = .42	Understanding of Topic M = 2.34, SD = .54 Amount of details included M = 2.16, SD = .61
	Experimental (n = 15)	Understanding of Topic M = 2.77, SD = .42 Amount of details M = 2.60, SD = .43	Understanding of Topic M = 2.67, SD = .41 Amount of details M = 2.53, SD = .35





3.1.2.3 Interaction between the two treatment (pre- & post-test x experimental & control) conditions

A significant interaction between the testing and grouping conditions was found on "Creative elements", $F = 6.98$, $p = .016$, partial $\eta^2 = .15$, as shown in Figure 4. Means and standard deviation of "Creative elements" can be found in Table 2.

3.2 Effects of drama in education on kindergarten students

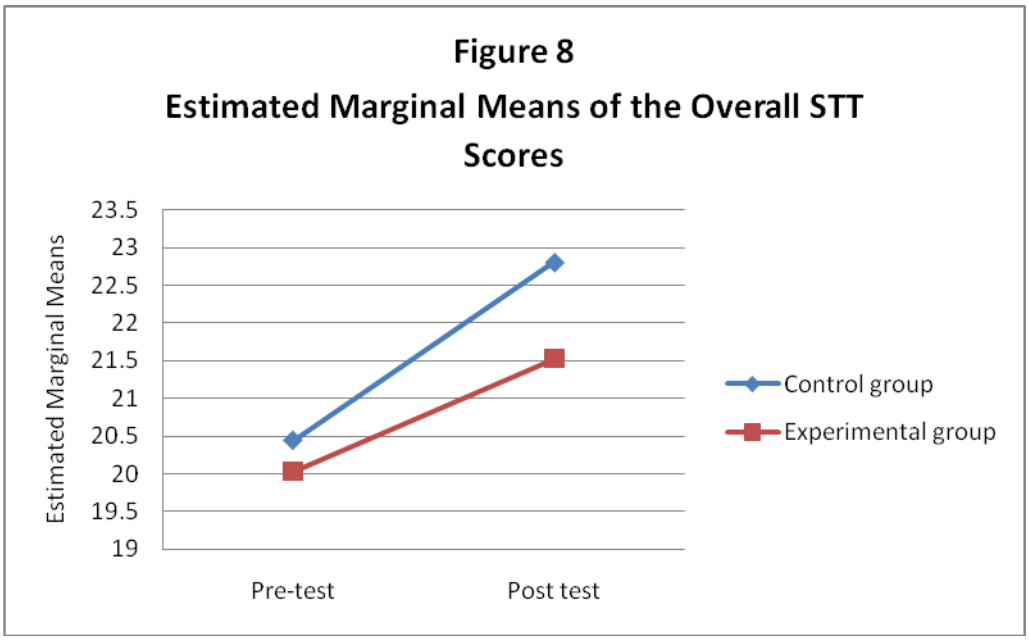
3.2.1 Overall STT Score of kindergarten students

A significant main effect was found among the pre- and post-tests, F (1, 118) = 17.45, $p < .001$, partial $\eta^2 = .13$, but not on the experimental and control condition, F (1, 118) = 2.01, $p = .158$, partial $\eta^2 = .02$; and there was also not an interaction between the two treatment conditions, F (1, 118) = .84, $p = .349$, partial $\eta^2 = .01$, as shown in Figure 8. Students scored significantly higher in the post-test, regardless of what groups, they were in. Means and standard deviations of the overall STT scores

for all treatment conditions are presented in Table 4.

Table 4
Mean kindergarten students' overall STT scores for each treatment condition.

		Test	
		Pre-test (n = 120)	Post-test (n = 120)
Group	Control (n = 35)	M = 20.44 SD = 3.74	M = 22.81 SD = 4.17
	Experimental (n = 85)	M = 20.03 SD = 3.81	M = 21.53 SD = 3.55



3.2.2 Individual STT items of kindergarten students

3.2.2.1 Main effect for the testing (pre- and post-test) condition

Significant main effect for the pre-test and post-test were found on the following items, "Understanding of topic", F (1, 118) = 6.70, p < .05, partial η^2 = .05; "Structure of story", F (1, 118) = 5.16, p < .05, partial η^2 = .04; "Clarity of speech", F (1, 118) = 11.98, p < .01, partial η^2 = .09; "Naming for story", F (1, 118) = 21.12, p < .001,

partial η^2 = .15; "Voice audibility", F (1, 118) = 29.38, p < .001, partial η^2 = .20; "Creative elements", F (1, 118) = 41.81, p < .001, partial η^2 = .26; and "Solutions to problems", F (1, 118) = 4.25, p < .05, partial η^2 = .04, as shown in Figures 9 to 15. Table 5 presents the means and standard deviations for these items in each of the treatment condition.

Table 5
Kindergarten students' means of the individual STT items with a significant testing effect.

		Test	
		Pre-test (n = 120)	Post-test (n = 120)
Group	Control (n = 35)	Understanding of Topic M = 2.79, SD = .66 Structure of Story M = 2.10, SD = .58 Clarity of Speech M = 3.41, SD = .54 Naming for Story M = 1.53, SD = .72 Voice Audibility M = 2.44, SD = .51 Creative Elements M = 1.29, SD = .41 Solutions to Problems M = 1.74, SD = .40	Understanding of Topic M = 3.01, SD = .45 Structure M = 2.31, SD = .92 Clarity of Speech M = 3.73, SD = .33 Naming for Story M = 2.26, SD = .90 Voice Audibility M = 2.81, SD = .41 Creative Elements M = 1.84, SD = .70 Solutions to Problems M = 1.43, SD = .70
	Experimental (n = 85)	Understanding of Topic M = 2.68, SD = .70 Structure of Story M = 2.08, SD = .64 Clarity of Speech M = 3.36, SD = .63 Naming for Story M = 1.81, SD = .78 Voice Audibility M = 2.31, SD = .58 Creative Elements M = 1.17, SD = .37 Solutions to Problems M = 1.18, SD = .47	Understanding of Topic M = 2.80, SD = .48 Structure of Story M = 2.28, SD = .59 Clarity of Speech M = 3.51, SD = .40 Naming for Story M = 2.11, SD = .91 Voice Audibility M = 2.72, SD = .56 Creative Elements M = 1.65, SD = .71 Solutions to Problems M = 1.24, SD = .53

Figure 9
Estimated Marginal Means of Understanding of Topic for the Kindergarten Students

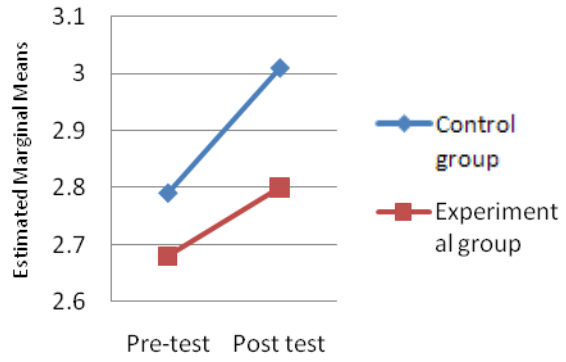


Figure 10
Estimated Marginal Means of Structure of Story for the Kindergarten Students

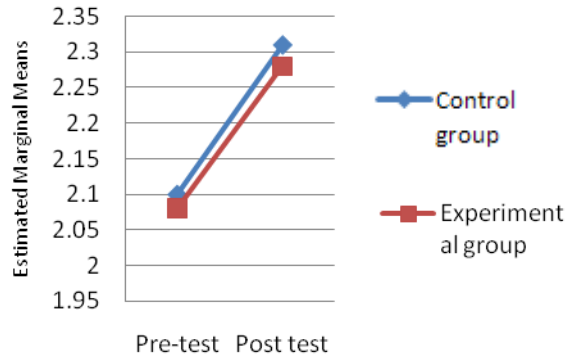


Figure 11
Estimated Marginal Means of Clarity of Speech for the Kindergarten Students

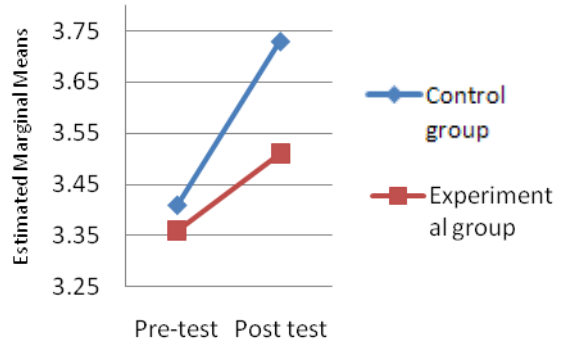


Figure 12
Estimated Marginal Means of Naming for Story for the Kindergarten Students

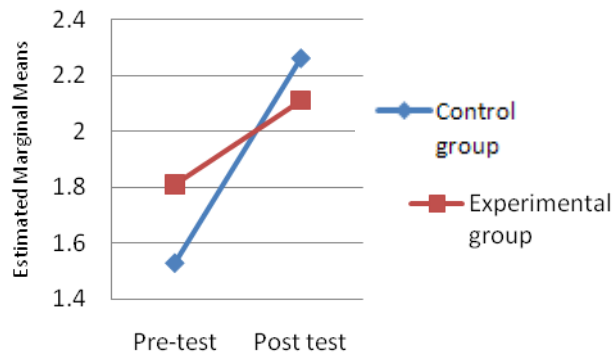


Figure 13
Estimated Marginal Means of Voice Audibility for the Kindergarten Students

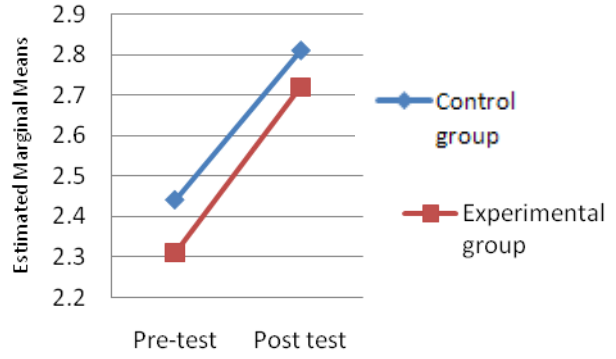
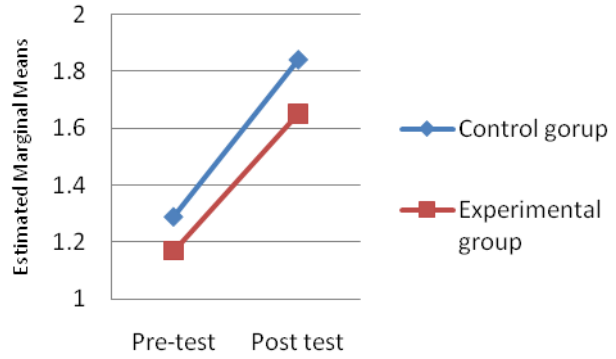
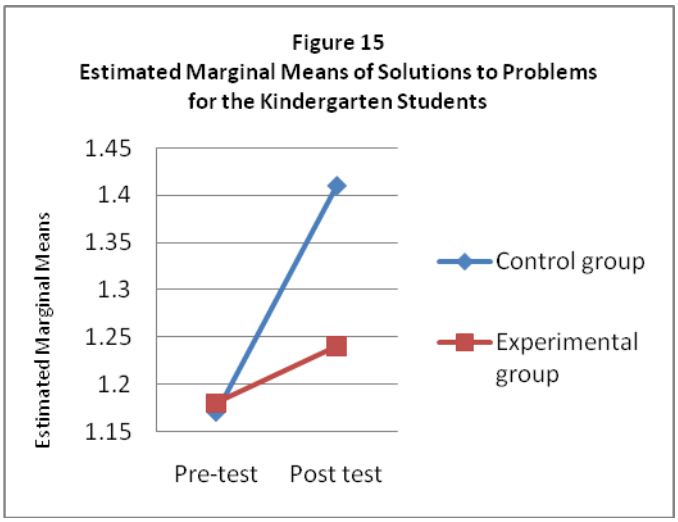


Figure 14
Estimated Marginal Means of Creative Elements for the Kindergarten Students



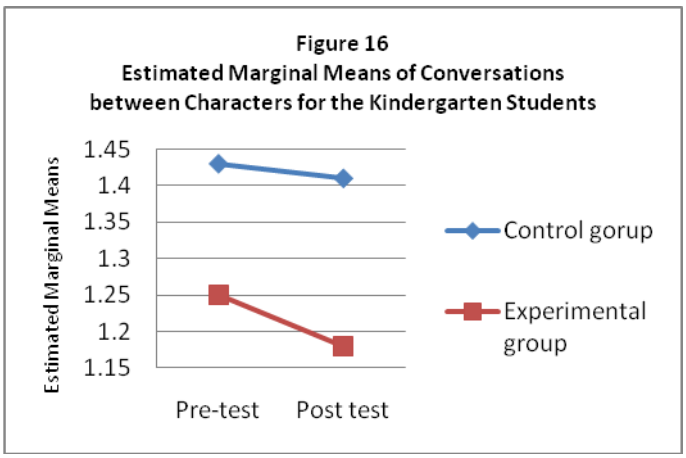


3.2.2.2 Main effect for the grouping (experimental and control) condition

A Significant main effect for the grouping condition was found on "Conversations between characters", F (1, 118) = 6.09, p < .05, partial η^2 = .05, as shown in Figure 16. Table 6 presents the mean and standard deviation for this item.

Table 6
Kindergarten students' mean scores of "Conversations between Characters" for each treatment condition.

		Test	
		Pre-test (n = 120)	Post-test (n = 120)
Group	Control (n = 35)	M = 1.43 SD = .72	M = 1.41 SD = .77
	Experimental (n = 85)	M = 1.25 SD = .61	M = 1.18 SD = .54



3.2.2.3 Interaction between the two treatment (pre & post-test x experimental and control) conditions

No significant interaction effect was found between the treatment conditions on any of the STT individual items.

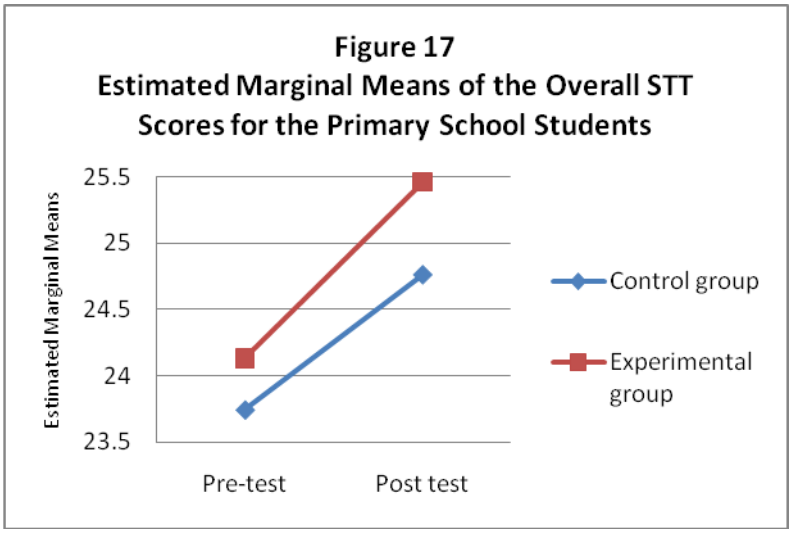
3.3 Effects of drama in education on primary school students

3.3.1 Overall STT scores of primary school students

There was a significant main effect for the testing condition, F (1,141) = 8.58, p <. 01, partial η^2 = .06, but not for the grouping condition, F (1,141) = .62, p = .431, partial η^2 = .00; there was also not a significant interaction between the two treatment conditions, F (1, 141) = .15, p = .697, partial η^2 = .00, as shown in Figure 17. Students scored significantly higher in the post test, regardless to what groups, experimental or control, they were in. Table 7 presents the means of the overall STT score for each treatment condition.

Table 7
Mean primary students' overall STT scores for each treatment condition.

		Test	
		Pre-test (n = 143)	Post test (n = 143)
Group	Control (n = 65)	M = 23.75 SD = 3.96	M = 24.76 SD = 5.24
	Experimental (n = 78)	M = 24.13 SD = 4.42	M = 25.46 SD = 5.06



3.3.2 Individual STT items of primary school students

3.3.2.1 Main effect for the testing (pre- and post-test) condition

Significant main effects for the testing condition were found on items "Amount of details included", F (1, 141) = 12.16, p < .01, partial η^2 = .08, "Structure of story", F (1, 141) = 75.70, p <.001. partial η^2 = .35, "Varied vocabulary", F(1, 141) = 14.20, p < .001, partial η^2 = .09, "Voice audibility", F (1, 141) = 8.26, p < .01, partial η^2 = .06, "Conversations between characters", F (1, 141) = 17.87, p < .001, partial η^2 = .11, "Humorous elements", F (1,141) = 4.97, p < .05, partial η^2 = .03, and "Solutions to problems", F (1, 141) = 7.37, p < .01, partial η^2 = .05, as shown in Figures 18 to 24. Table 8 presents the means and standard deviations for these items in each of the experimental condition.

Table 8

Means and standard deviations of the individual items of STT with a significant testing effect.

		Test	
		Pre-test (n = 143)	Post-test (n = 143)
Group	Control (n = 65)	Amount of details Included M = 2.85, SD = .62 Structure of Story M = 2.75, SD = .67 Varied Vocabulary M = 2.75, SD = .42 Voice Audibility M = 2.74, SD = .59 **Conversations between characters** M = 1.52, SD = .79 Humorous Elements M = 1.31, SD = .47 Solutions to Problems M = 1.23, SD = .45	Amount of details Included M = 2.58 , SD = .72 Structure of Story M = 3.26, SD = .78 Varied Vocabulary M = 2.51, SD = .55 Voice Audibility M = 2.92, SD = .59 **Conversations between characters** M = 2.26, SD = 1.11 Humorous Elements M = 1.42, SD = .64 Solutions to Problems M = 1.49, SD = .84
	Experimental (n = 78)	Amount of details Included M = 2.92, SD = .71 Structure of Story M = 2.81, SD = .58 Varied Vocabulary M = 2.76, SD = .42 Voice Audibility M = 2.74, SD = .68 **Conversations between characters** M = 1.83, SD = .97 Humorous Elements M = 1.28, SD = .45 Solutions to Problems M = 1.29, SD = .51	Amount of details Included M = 2.69, SD = .88 Structure of Story M = 3.47, SD = .71 Varied Vocabulary M = 2.65, SD = .58 Voice Audibility M = 2.92, SD = .52 **Conversations betw**een **characters** M = 2.03, SD = 1.18 Humorous Elements M = 1.47, SD = .67 Solutions to Problems M = 1.42, SD = .75

Note. Items with a significant interaction effect between the treatment conditions are shown in boldface.

Figure 18
Estimated Marginal Means of the Amount of Details Included for the Primary School Students

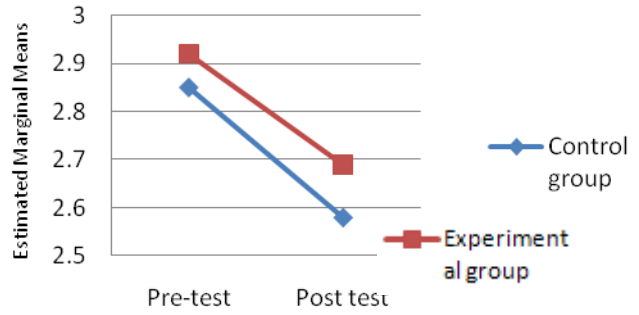


Figure 19
Estimated Marginal Means of Structure of story for the Primary School Students

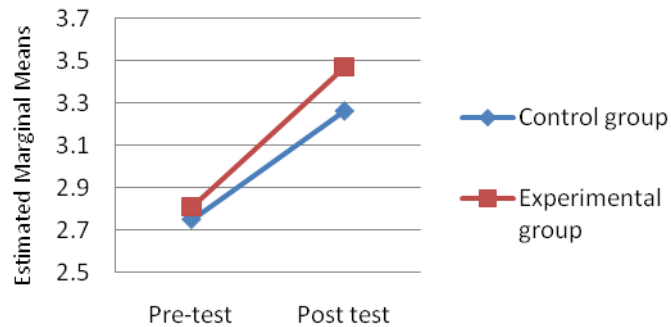


Figure 20
Estimated Marginal Means of Voice Audibility for the Primary School Students

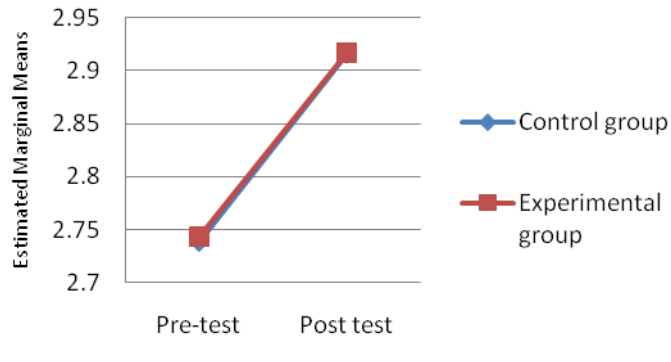


Figure 21
Estimated Marginal Means of Varied Vocabulary for the Primary School Students

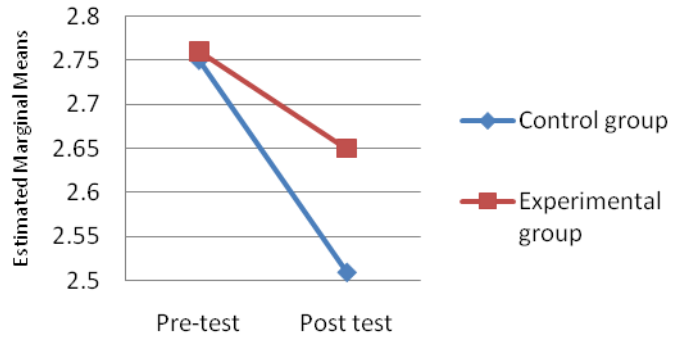


Figure 22
Estimated Marginal Means of Conversations Between Characters for the Primary School Students

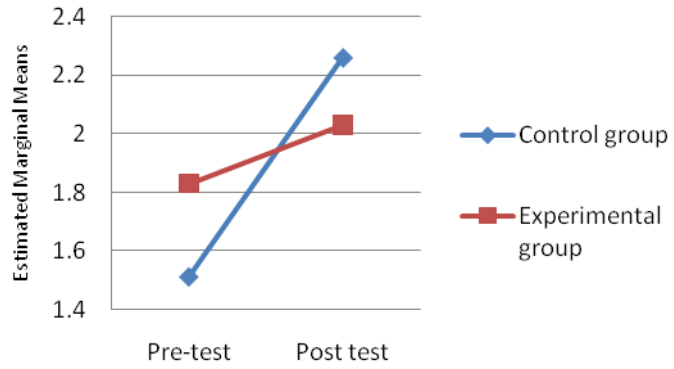
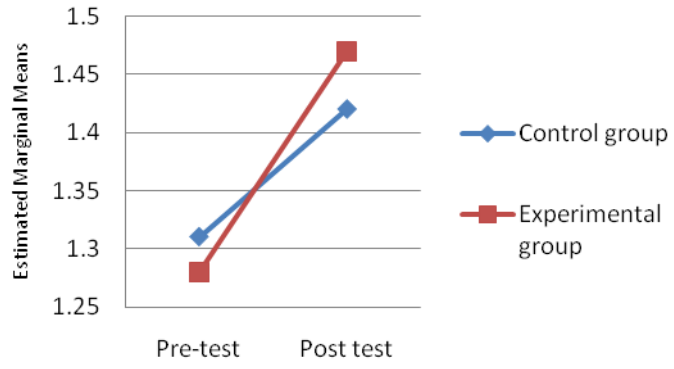
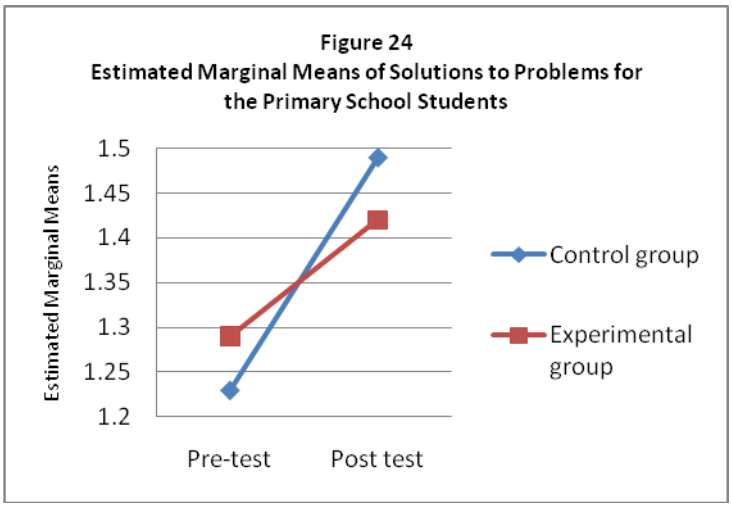


Figure 23
Estimated Marginal Means of Humorous Elements for the Primay School Students





3.3.2.2 Main effect for the grouping (experimental and control) condition

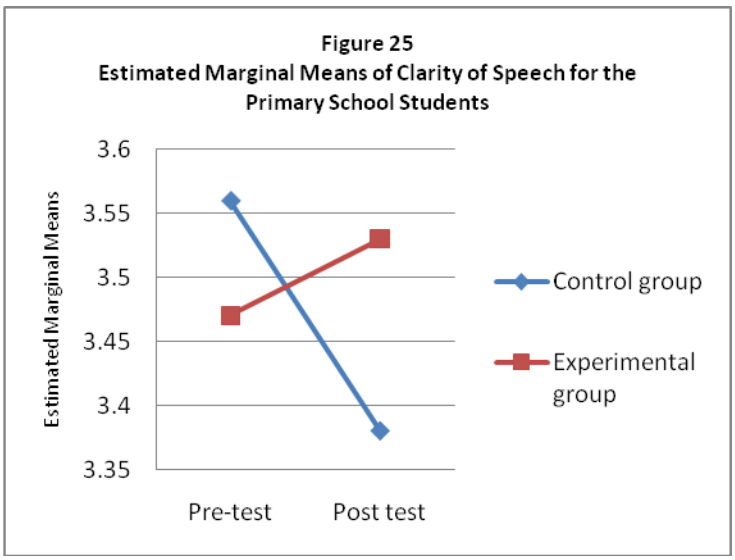
No significant main effect for the control and experimental condition was found in the current study among primary school students.

3.3.2.3 Interaction between the two treatment (pre- & post-test x experimental and control) conditions

Significant interactions between the testing and grouping conditions were found on "Conversations between characters", F (1, 141) = 6.00, $p < .05$, partial $\eta^2 = .04$ and "Clarity of speech", F (1, 141) = 5.29, $p < .05$, partial $\eta^2 = .04$, as shown in Figure 22 and 25 respectively. Means and standard deviations for these two items can be found in Table 8 and 9 respectively.

Table 9
Primary students' mean scores of Clarity of speech for each treatment condition.

		Test	
		Pre-test (n = 143)	Post-test (n = 143)
Group	Control (n = 65)	M = 3.56 SD = .55	M = 3.38 SD = .76
	Experimental (n = 78)	M = 3.47 SD = .59	M = 3.53 SD = .68



3.4 Teacher-Rated Characteristics of Students

3.4.1 The "Dramatics and creativity characteristic" and "Positive emotion responses" of Students with Special Needs

3.4.1.1 Main effects for the testing (pre- and post-test) condition

A significant main effect between the pre- and post-tests was found on the teacher-rated "Dramatics & Creativity Characteristics", F (1, 37) = 15.03, p < .001, partial η^2 = .29, as shown in Figure 26. Means and standard deviation of the "Dramatics and creativity characteristics", and "Positive emotion responses" for each treatment condition are presented in Table 10.

3.4.1.2 Main effects for the grouping (experimental and control) condition

No significant main effect between the experimental and control groups was found on either the teacher-rated "Dramatics & Creativity Characteristics" or teacher-rated "Positive emotion responses".

3.4.1.3 Interaction effects for the testing and grouping (pre- & post-test x experimental and control) conditions

No significant interaction effect was found for the testing and grouping conditions.

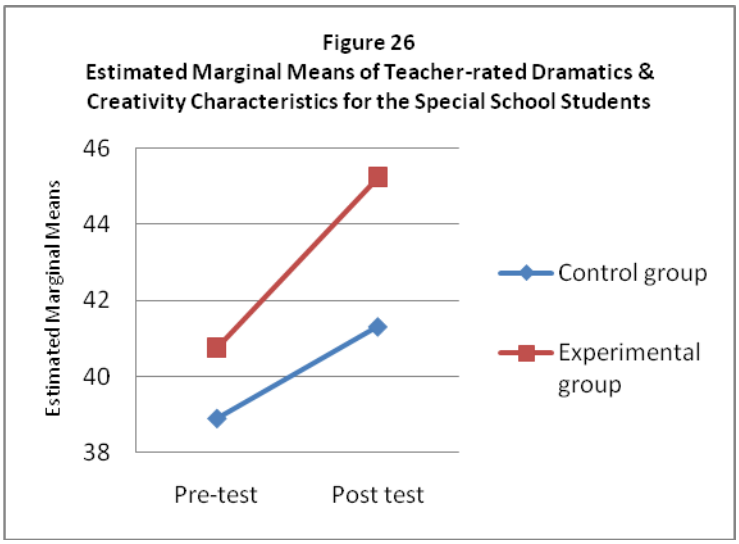


Table 10

Special school students' means of teacher-rated Dramatic & Creativity Characteristics and Positive Emotion Responses for each treatment condition.

		Test	
		Pre-test (n = 39)	Post-test (n = 39)
Group	Control (n =17)	Dramatics & Creativity characteristics^{+} M = 38.91, SD = 9.62 Positive emotion responses M = 69.86, SD = 8.95	Dramatics & Creativity characteristics^{+} M = 41.32, SD = 11.43 Positive emotion responses M = 71.95, SD = 7.45
	Experimental (n =22)	Dramatics & Creativity characteristics^{+} M = 40.76, SD = 9.68 Positive emotion responses M = 70.82, SD = 4.82	Dramatics & Creativity characteristics^{+} M = 45.24, SD = 8.3810.58 Positive emotion responses M = 72.71, SD = 6.46

$^{+}$main testing effect, *main grouping effect, ^interaction effect.

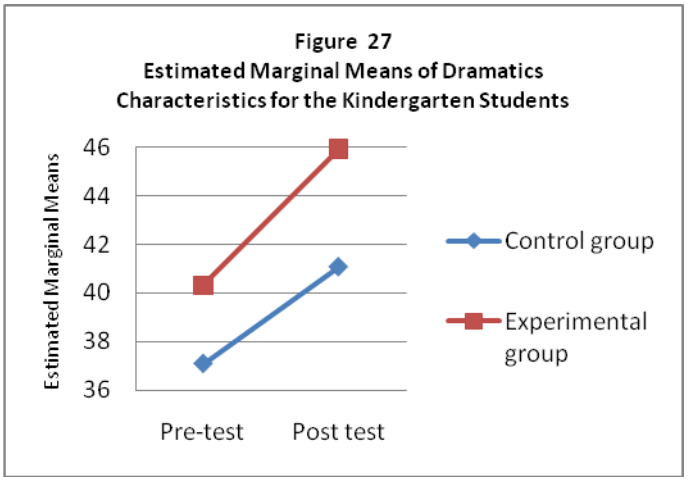
3.4.2 Teacher-Rated Characteristics of Kindergarten Students

3.4.2.1. Teacher-rated "Dramatics Characteristics" and "Creativity Characteristics"

Significant main effects between the pre-test and post test were found on all of the 2 teacher-rated behavioral characteristics "Dramatics characteristics", F (1, 121) = 31.50, $p < .001$, partial $\eta^2 = .21$, and "Creativity characteristics", F (1, 121) = 30.19, $p < .001$, partial $\eta^2 = .20$ as shown in Figures 27 and 28. Means and standard deviations for these two behavioral characteristics are presented in table 11.

A significant main effect for the grouping condition was found on the teacher-rated "Dramatics characteristic", F (1, 121) = 9.06, $p < .01$, partial $\eta^2 = .07$.

No significant interaction was found for the testing and grouping conditions.



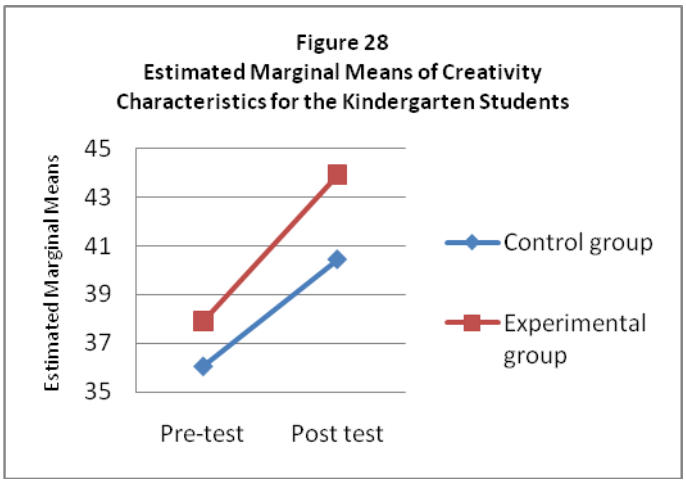


Table 11

Kindergarten students' means of the Dramatics Characteristics and Creativity Characteristics for each treatment condition.

		Test	
		Pre-test (n = 123)	Post-test (n = 123)
Group	Control (n =36)	Dramatic characteristics^{+}* M = 37.08, SD = 8.38 Creativity Characteristics^{+} M = 36.06, SD = 9.46	Dramatic characteristics^{+}* M = 41.08, SD = 9.04 Creativity Characteristics^{+} M = 40.44, SD = 10.24
	Experimental (n =87)	Dramatic characteristics^{+}* M = 40.31, SD = 8.44 Creativity Characteristics^{+} M = 37.90, SD = 8.85	Dramatic characteristics^{+}* M = 45.92, SD = 6.92 Creativity Characteristics^{+} M = 43.91, SD = 7.67

$^{+}$main testing effect, *main grouping effect, ^interaction effect.

3.4.3 Student Self-Reported Characteristics of Primary School Students

3.4.3.1 Main effects for the testing (pre- and post-test) condition

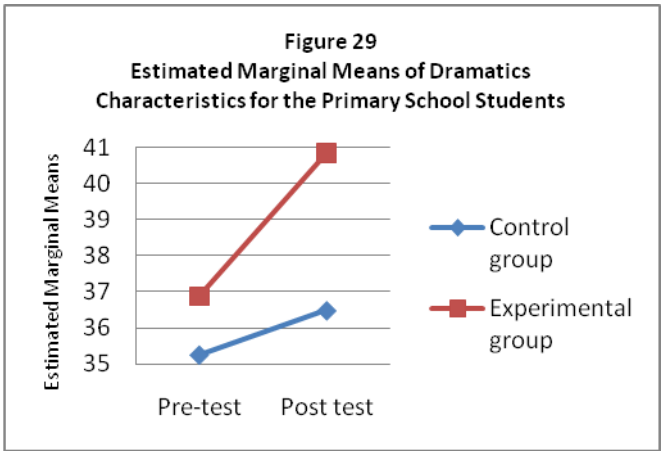
Significant main effects for the testing condition were found all of the 4 behavioral characteristics, "Dramatics characteristics", F (1, 1414) = 58.21, p < .001, partial η^2 = .04, "Creativity characteristics", F (1, 1414) = 14.67, p < .001, partial η^2 = .01, and "Communication characteristics", F (1, 1414) = 33.91, p < .001, partial η^2

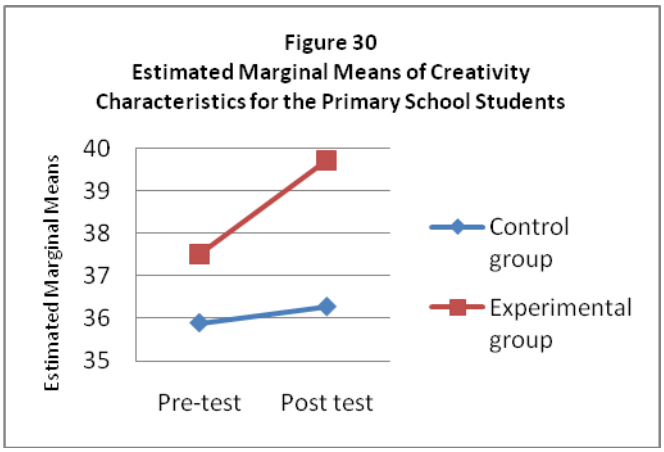
= .02, and "Motivation characteristics", F (1, 1414) = 9.64, p < .01, as shown in Figures 29 to 32. Table 12 presents the means and standard deviations for the above 4 behavioral characteristics.

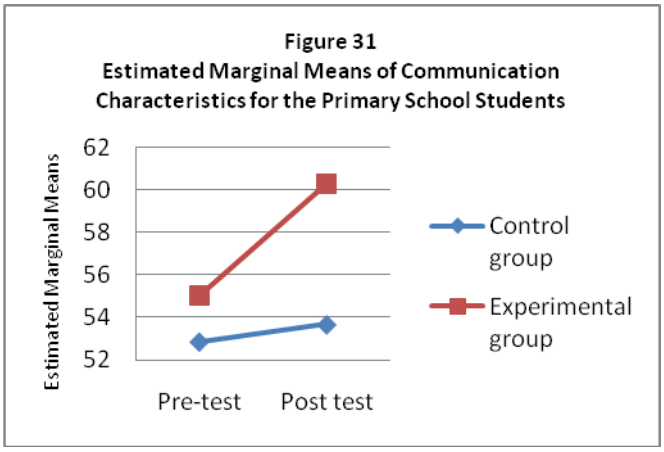
Table 12
Primary students' means on their Behavioral Characteristics.

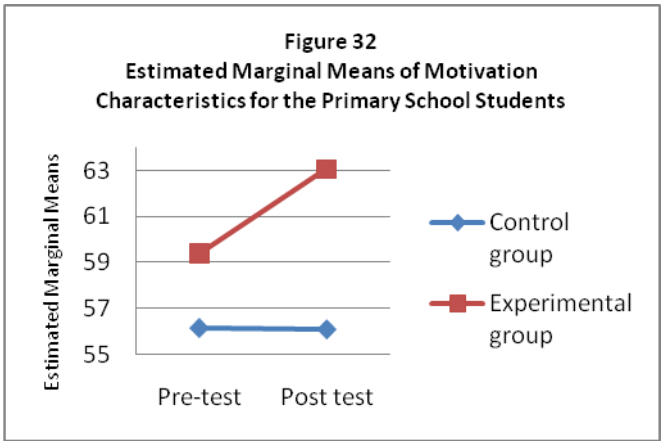
		Test	
		Pre-test (n = 1414)	Post-test (n = 1414)
Group	Control (n = 690)	Dramatics characteristics^{+}*^ M = 35.26, SD = 11.54 Creativity Characteristics^{+}*^ M = 35.89, SD = 11.30 Communication Characteristics^{+}*^ M = 52.86, SD = 17.39 Motivation Characteristics^{+}*^ M = 56.12, SD = 20.79	Dramatics characteristics^{+}*^ M = 36.49, SD = 11.22 Creativity Characteristics^{+}*^ M = 36.28, SD = 11.20 Communication Characteristics^{+}*^ M = 53.67, SD = 16.60 Motivation Characteristics^{+}*^ M = 56.09, SD = 19.33
	Experimental (n = 726)	Dramatics characteristics^{+}*^ M = 36.88, SD = 11.47 Creativity Characteristic^{+}*^ M = 37.51, SD = 11.29 Communication Characteristics^{+}*^ M = 55.03, SD = 17.42 .Motivation Characteristics^{+}*^ M = 59.40, SD = 19.34	Dramatics characteristics^{+}*^ M = 40.85, SD = 10.71 Creativity Characteristics^{+}*^ M = 39.71, SD = 10.78 Communication Characteristics^{+}*^ M = 60.28, SD = 16.07 Motivation Characteristics^{+}*^ M = 63.06, SD = 18.15

$^{+}$main testing effect, *main grouping effect, ^interaction effect.









3.4.3.2 Main effects for the grouping (experimental and control) condition

Significant main effects for the experimental and control groups were found on, again, all of the 4 behavioral characteristics, with F (1, 1414) = 37.17, p < .001, partial η^2 = .03; F (1, 1414) = 26.94, p <.001, partial η^2 = .02; F (1, 1414) = 36.16, p

< .001, partial η^2 = .03, *F* (1, 1414) = 36.42, *p* < .001, partial η^2 = .03 for the "Dramatic characteristic", "Creativity characteristic", "Communication characteristic", and "Motivation characteristics".

3.4.3.3 Interaction between the testing and grouping (pre- and post-test x experimental and control) conditions

Significant interactions between the testing and grouping conditions were found on all of the behavioral characteristics, with *F* (1, 1414) = 16.23, *p* < .001, partial η^2 = .01, *F* (1, 1414) = 7.05, *p* < .01, partial η^2 = .01, *F* (1, 1414) = 18.10, *p* < .001, partial η^2 = .01, *F* (1, 1414) = 9.87, *p* < .01, partial η^2 = .01.

3.5 Effects of drama in education on teachers

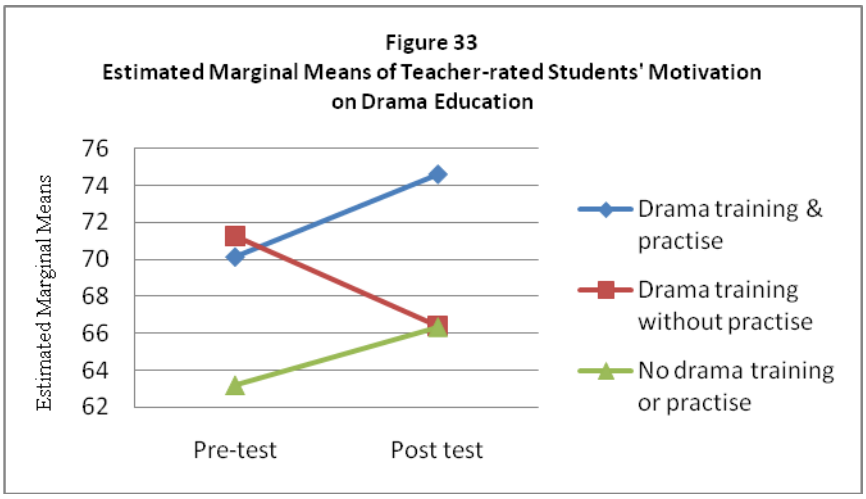
For the teacher participants, grouping condition was referring to three groups. The 3 grouping conditions were, the experimental group which participants received training in drama education and practiced what they had learnt, the control group 1 which participants received training in drama education but was not required to practice what they had learnt, and the control group 2 which participants did not receive any training in drama education and did not practice at all.

3.5.1 Teacher-Rated Student's Motivation on Drama Education in Kindergarten Students

No significant main effect for the testing condition was found, F (1, 98) = .52, p = .472, partial η^2 = .01. Significant main effect for the grouping condition was identified, F (2, 98) = 9.66, p < .001, partial η^2 = .17, as shown in figure 33. Subsequent pairwise comparisons indicated that the significant difference was contributed by the experimental group and the control group 2. Significant interaction was also found between testing and grouping conditions, F (2, 98) = 3.84, p < .05, partial η^2 = .07. The means and standard deviations for all treatment conditions are shown in Table 13.

Table 13
Teachers' Mean rating scores for their students in Motivation on Drama Education for each treatment condition.

		Test	
		Pre-test (n = 101)	Post-test (n = 101)
Group	Drama training & practice (experimental, n = 41)	M = 70.12 SD = 6.85	M = 74.61 SD = 8.08
	Drama training without practice (control 1, n = 17)	M = 71.24 SD = 6.54	M = 66.41 SD = 10.42
	No drama training or practice (control 2, n = 43)	M = 63.19 SD = 11.40	M = 66.33 SD = 12.85



3.5.2 Creative Fostering Teaching Style

3.5.2.1Main effect for the testing (pre- and post-test) condition

Significant main effects for the testing condition were found on the subscales "Independent learning", F (1, 122) = 4.67, $p < .05$, partial $\eta^2 = .04$, "Cooperative learning", F (1, 122) = 6.32, $p < .05$, partial $\eta^2 = .05$, "Suspended judgment", F (1, 122) = 6.49, $p < .05$, partial $\eta^2 = .05$, "Flexibility in thinking", F (1, 122) = 6.50, $p < .05$, partial $\eta^2 = .05$, "Self evaluation", F (1, 122) = 6.59, $p < .05$, partial $\eta^2 = .05$, and "Opportunities for trial", F (1, 122) = 5.61, $p = .019$, partial $\eta^2 = .04$, as shown in Figures 34 to 39. Table 14 presents the means and standard deviations for these items in each treatment condition.

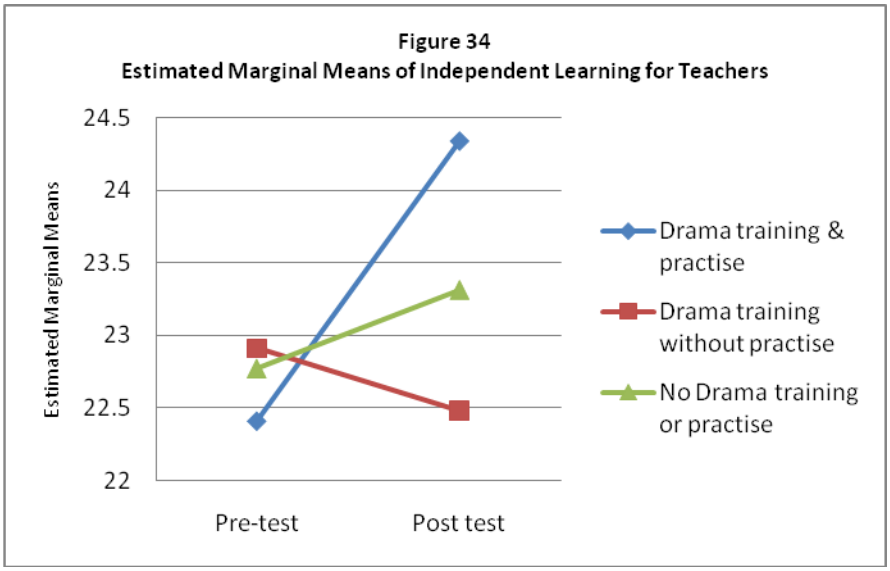


Figure 35
Estimated Marginal Means of Cooperative Learning for Teachers

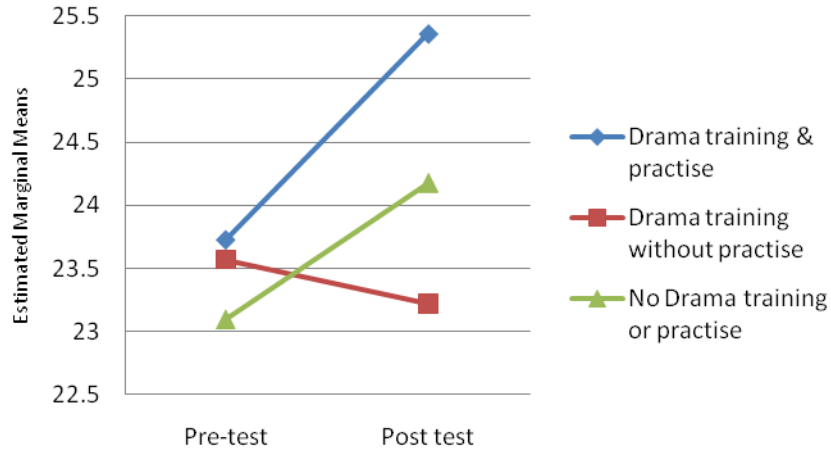


Figure 36
Estimated Marginal Means of Suspended Judgment for Teachers

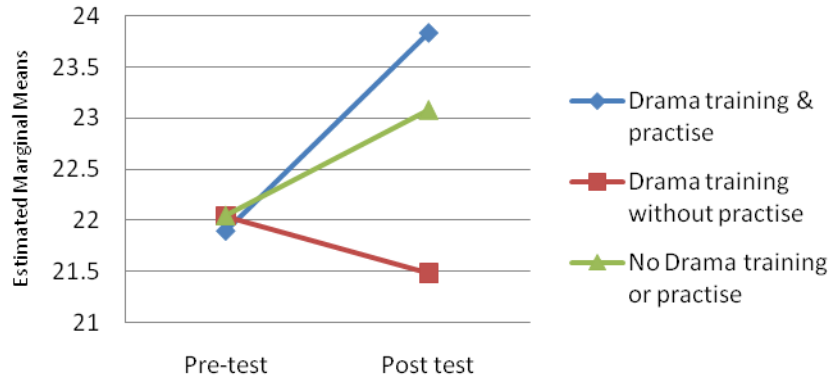


Figure 37
Estimated Marginal Means of Flexibility in Thinking for Teachers

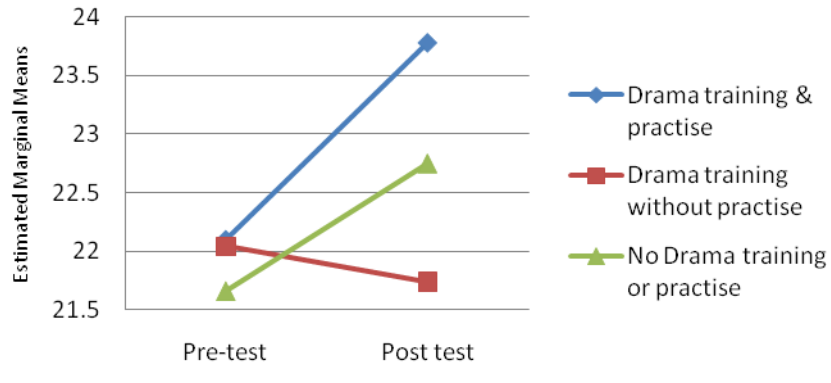


Figure 38
Estimated Marginal Means of Self Evaluation for Teachers

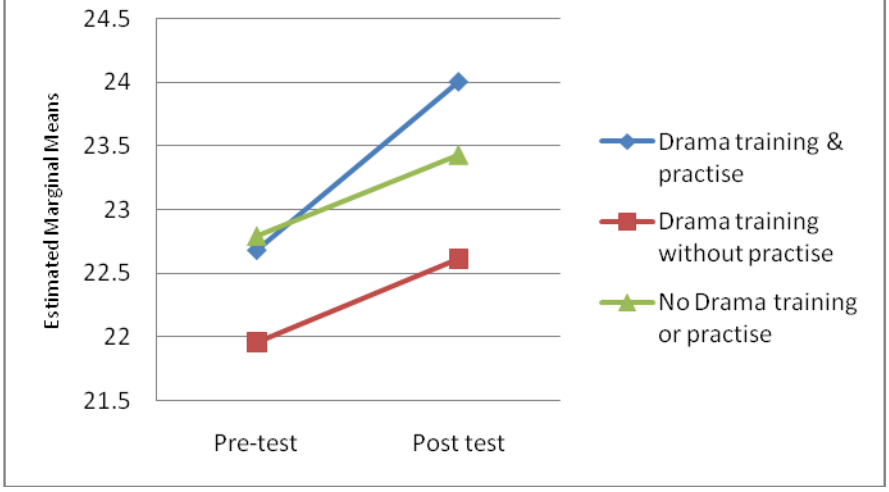


Figure 39
Estimated Marginal Means of Opportunities for Trial for Teachers

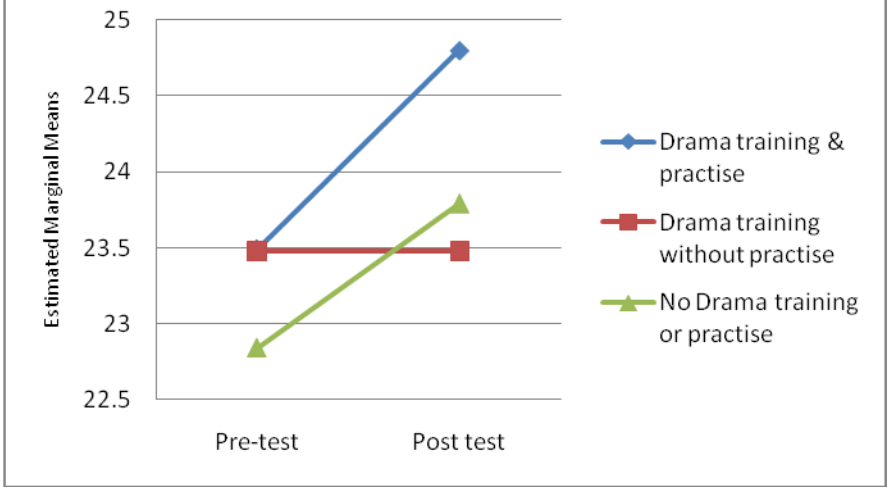


Table 14

Teachers' means of the CFT Index subscales, Independent learning, Cooperative learning, Suspended judgment, Flexibility in thinking, Self evaluation, and Opportunities for trial for each treatment condition.

		Test	
		Pre-test (n = 125)	Post-test (n = 125)
Group	Drama training & practice (experimental, n = 41)	**Independent learning** M = 22.41, SD = 3.33 Cooperative learning M = 23.73, SD = 3.01 **Suspended judgment** M = 21.90, SD = 3.25 Flexibility in thinking M = 22.10, SD = 3.43 Self evaluation M = 22.68, SD = 3.02 Opportunities for trial M = 23.49, SD = 3.23	**Independent learning** M = 24.34, SD = 3.07 Cooperative learning M = 25.36, SD = 2.47 **Suspended judgment** M = 23.83, SD = 2.77 Flexibility in thinking M = 23.78, SD = 2.82 Self evaluation M = 24.00, SD = 3.02 Opportunities for trial M = 24.80, SD = 2.97
	Drama training without practice (control 1, n = 23)	**Independent learning** M = 22.91, SD = 3.30 Cooperative learning M = 23.57, SD = 2.63 **Suspended judgment** M = 22.04, SD = 2.87 Flexibility in thinking M = 22.04, SD = 3.20 Self evaluation M = 21.96, SD = 3.17 Opportunities for trial M = 23.48, SD = 2.95	**Independent learning** M = 22.48, SD = 3.89 Cooperative learning M = 23.22, SD = 3.41 **Suspended judgment** M = 21.48, SD = 3.15 Flexibility in thinking M = 21.74, SD = 3.43 Self evaluation M = 22.61, SD = 3.31 Opportunities for trial M = 23.48, SD = 3.20
	No drama training or practice (control 2, n = 61)	**Independent learning** M = 22.77, SD = 3.39 Cooperative learning M = 23.10, SD = 3.46 **Suspended judgment** M = 22.05, SD = 3.37 Flexibility in thinking M = 21.66, SD = 3.43 Self evaluation M = 22.79, SD = 3.37 Opportunities for trial M = 22.84, SD = 3.44	**Independent learning** M = 23.31, SD = 2.66 Cooperative learning M = 24.18, SD = 2.40 **Suspended judgment** M = 23.08, SD = 2.82 Flexibility in thinking M = 22.75, SD = 2.76 Self evaluation M = 23.43, SD = 3.06 Opportunities for trial M = 23.79, SD = 2.91

Note. Items with a significant interaction effect between the treatment conditions are shown in boldface.

3.5.2.2 Main effect for the grouping (experimental and control) condition

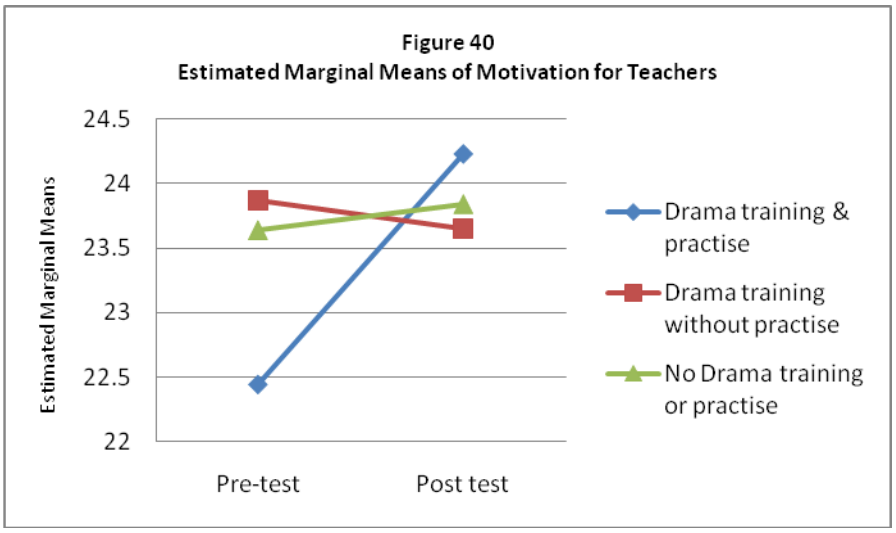
No significant main effect for the grouping condition was found among teachers in the current study on any on the subscale of the CFT Index.

3.5.2.3 Interaction between the two treatment (pre- and post-test x experimental and control) conditions

Significant interactions between the testing condition and grouping condition were found on subscales "Independent learning", F (2, 122) = 4.34, $p < .015$, partial $\eta^2 = .07$, "Motivation", F (2, 122) = 4.00, $p < .05$, partial $\eta^2 = .06$, and "Suspended judgment", F = (2, 122) = 4.37, $p < .05$, partial $\eta^2 = .07$. The means and standard deviations for "Independent learning" and "Suspended judgment" are stated in Table 14 and shown in Figure 34 and 36 respectively; the mean and standard deviation for "Motivation" is presented in Table 15 and the interaction effect is presented in Figure 40.

Table 15
Teachers' means of the CFT Index Motivation subscale for each treatment condition.

		Test	
		Pre-test (n = 125)	Post-test (n =125)
Group	Drama training & practice (experimental, n = 41)	M = 22.44 SD = 3.19	M = 24.23 SD = 2.61
	Drama training without practice (control 1, n = 23)	M = 23.87 SD = 2.80	M = 23.65 SD = 3.45
	No drama training or practice (control 2, n = 61)	M = 23.64 SD = 3.36	M = 23.84 SD = 2.93



3.6 Effects of drama in education documented from Teachers Focus Group Interviews

Analysis of the group interviews with 11 teachers, from 3 different kindergartens and primary school in Hong Kong revealed a detailed picture of how teachers and children were benefited from Drama-In-Education class (DIE) and how children art groups initiated partnership with schools. These 3 schools adopted drama skills as a new way to teach in the traditional subject's lessons. It is so called "Learning through Drama", a type of DIE (Hui, 2007). During the interviews, 10 questions were asked and the themes of the questions were related to the feedback to the project and the teacher's personal benefit. The questions included the following:

i) How do they know about the Quality Thematic Network (QTN);

ii) What are the changes of teaching method and student's learning after the DIE class;

iii) What are the differences between traditional classroom learning and DIE class and the impact to teachers and students;

iv) How is the interaction between teachers and students during the class and the discipline control;

v) How are the generic skills being enhanced;

vi) How is the cooperation and support with the school administration;

vii) How is the cooperation with the institute collaborator in charging of the project;

viii) What are their suggestions to the project;

ix) Which part of the teachers' personal growth is enhanced;

x) Will they continue to use the skills of drama-in-education and what are the reasons behind?

These themes will be discussed in the following sections. Five teachers from Sau Ming Primary School joined the interview; they were Miss A, Miss B, Mr. C, Miss D, and Miss E. Their teaching subjects were Chinese and English. Three teachers came from a kindergarten in Wan Chai, included Miss F, Miss G and Miss H. A kindergarten in Lam Tin also sent three teachers to join the interview, they were Miss I, Miss J, and Miss K. Different from the primary school teachers, teachers in kindergarten taught every subject.

3.6.1 How do they know the Quality Thematic Network (QTN)

Teachers from 3 schools stated that they had started the QTN partnership with Ming Ri Institute for Arts Education since the school principals directly or indirectly sent them to the seminars, presentations and training workshops which were held by Ming Ri. Obviously, it was a top-down persuasion from the school principals to the teachers. Miss H, mentioned that she got to know the QTN by joining Ming Ri's DIE seminar. "*My principal asks me to represent our kindergarten to join the DIE seminar. From the seminar I know that Ming Ri is inviting some kindergartens, primary and secondary schools as seed schools to promote DIE. This is the first time I get to know this network*," said Miss H. Miss A, a drama teacher of a primary school, had joined some of Ming Ri's drama activities before and now she was asked by her school principal to organize a team and joined the network. "*My principal is interested in this project and he thinks that drama is similar to DIE, that's why he asks me to hold this project. Actually I have joined Ming Ri's drama activities before; this time I would like to know the difference between drama act and drama-in-education*," said Miss A.

3.6.2 The changes of teaching method and student's learning after the DIE class

3.6.2.1 Teaching method

DIE teaching as described by the teachers in this study appeared to be

professional and systematic. Before starting a partnership with Ming Ri, teachers from 3 schools would use role play in teaching as a technique to foster student's understanding in class. During Ming Ri's drama training, all teachers shared about the difficulties of teaching drama. From their views, drama was a professional and artistic discipline which they had not had enough knowledge about it. However, this difficulty seemed to be solved after the training. Miss G and Miss H indicated that they had great improvement in teaching skills. "*We used to do role-play and other drama activities in school. After attending Ming Ri's training, we have learned how to do it systematically. Now we have strengthened and deepened our drama teaching skills.*" Miss K shared that her problem had been solved: "*From the beginning, I worried about how to give teaching to a student as a non-professional in drama. I found that it was not that difficult to handle it after the training. It depended a lot on the input of teachers*." Response from Miss B from another school echoed with Miss K's opinion. "*To me, DIE is a challenge as I haven't explored it too much before. Now I notice that through the body in action can help my students and I enter the drama's environment much easier.*" Another teacher Miss E gave us an example taught by Ming Ri. "*From the workshop, we learned how to present the drama activities step by step and do it from easy to hard. Moreover, give names to the drama games so that students can know more the details of the games. To us, as a teacher, I can feel that I am teaching*

some concrete materials instead of just playing."

According to Berliner's (1988) Stages of Teacher Practicing Constructivist Teaching, the teachers from all three schools can be categorized as an advanced beginner of DIE class teachers. The teachers who joined this project had gained some experience in teaching drama or story-telling. From their report, they learnt some skills from Ming Ri's drama educators and individually presented it in class qualifying them as skillful DIE teachers. Indeed, there is not any objective scoring can be given to teacher's performance. However, from their response in the interview, they still have some questions towards the application of the skills. Obviously, they still lacked a certain responsibility for their actions. Only the coordinating teacher, Miss A, did show her intuitive sense of the situation about DIE class. From the interview, she mentioned what she decided to do in the DIE class and how she shared the DIE class teaching experience with her colleagues. She fully showed her understanding and acceptance of the meaning of learning through drama. However, it should be noted that the DIE class had just presented in schools. All teachers had not received any formal qualifications of drama teaching – they considered themselves still a novice in teaching DIE. It is believed that practice can lead the teachers become an expert in teaching DIE class.

The interview data revealed teachers' positive feelings about their DIE teaching

experience. DIE teaching was described as enjoyable and stimulating. "*To me, teaching becomes more enjoyable. Since we adopted the DIE teaching skills in traditional subjects' classes, the atmosphere in class was more vigorous than before. Both of the students and teachers could be stimulated and had enhancement in thinking,*" said Miss A. Her colleague, Mr. C gave us a precise opinion of DIE: "*Teaching is fun in DIE class*."

3.6.2.2 Student learning

Apart from the DIE teaching, teachers from the interview frequently responded to the students' changes in learning by their observation. Over 14% of the transcription content (included all three schools) was related to this part. First, students were actively participating in DIE class. After attending to Ming Ri's drama workshop, Miss H mentioned that she would give a longer warm-up exercise to the students so that they could relax their body and imaginative brain. Afterwards, students had involved in class and they would have many of their own opinions in role-play.

Teachers found that DIE gave students an opportunity to be and express themselves. In kindergartens, young students are in a stage of speech and language development. As Miss F indicated, "*Educating students with drama activities gives*

students a chance to talk about themselves. Students are encouraged to speak more or use their body language to share their idea. For example, we held a function about career. Students would share their experience of seeing doctor and imitated the actions that the doctor did." It is obvious that under a drama teaching environment, students have many opportunities to freely practice their speaking and share their own view. The same phenomenon can be found in primary school setting. Both Miss A and Miss B noticed that students, especially the students who appeared to be low-motivated in class, had made a great change during the DIE lesson. "*...I am so happy to see that the students who are shy and seldom answer questions can perform totally different when I give them a character. I remembered that I have been to a peer observation in a low-academic performance class when they were having their DIE lesson. I worried that they couldn't perform actively in class and the teaching progress would be affected. However, all students enjoyed the class. They could show their understanding to all contents. Through the use of drama, I recognize that they have improvement in their learning attitude and more importantly, their confidence in learning*." Therefore, DIE did enhance students' self-confidence and self-expression. They became more willing to participate in class, listen and respond to the teachers.

Another obvious change was observed in student's learning style and higher learning motivation. In a kindergarten setting, as Miss F indicated that the orientation

of drama was play. When using drama skills as a tool to teach students, they had higher motivation to learn in class. Indeed, not only kindergarten students enjoyed learning by play, students at other levels also displayed such enjoyment. Miss D supported that DIE could raise student's learning motivation. "*In general, English is an inactive lesson. If I give them an article, they may not have interest in reading it. However, when I adopt drama in teaching English, students understand that if they really want to perform well, they need to read the article deeply to understand more about the characters*." said Miss D, "*On the other hand, they are highly motivated in learning English.*" For those students who are not good at English, she said, '*Students understand that through the use of drama, they can express their idea not only by speaking, but their body language and face emotion. Therefore, they can establish a stronger interest in learning English.*"

Teachers from kindergartens also pointed out an interesting change in student's learning. Miss H addressed that students were willing to show the knowledge they had learnt in class: "*Students can remember the knowledge better.*" Obviously, students have positive enhancement in memory after attending the DIE class. The learned information also processed more deeply.

To conclude student's benefit in learning, once again, Mr. C gave us a precise conclusion: "*Under a happy learning environment, students are bound to have better*

learning outcome.".

3.6.3 The difference between traditional classroom teaching and teaching in DIE class and the impacts to teachers and students

The interviews with the teachers devoted so much to make a difference between traditional classroom teaching and DIE class. Over 9% of the transcription content was responded by the teachers. All the teachers reported that DIE class has positive impacts on teaching. First, the teaching had been changed from one-way teaching to interactive teaching. Normally, students sat properly on their seats and listened to their teachers. The learning and teaching situation was different in a DIE class. "*Drama emphasizes interaction. Students will improvise creation and share their life experience to classmates and teacher. The atmosphere in class is lively and motivated*," said Miss F. Miss K, from another kindergarten, supported her opinion. "*In a traditional setting, teacher dominates the whole class. Now, after adding drama elements in teaching, student can have more freedom to express themselves*," said Miss K. Responses from Miss E also echoed with Miss K's idea, "*As a teacher, we talked less than before. Now students will discuss in a small group and express their answers to me in different ways."* In other words, teaching in a DIE class was directed to a student-centered approach instead of a teacher-centered approach.

The analysis of learning outcome and the goal of teaching were also different between traditional classroom learning and DIE class. In traditional classroom learning, only by giving a quiz or homework to students could the teachers notice that whether the students understand the content of a lesson. In DIE class, the analysis was quite different and much easier. Miss B addressed teachers could have greater understanding to every single student in DIE class. "*... in DIE class, you can analyze the student's understanding of a lesson directly from student's instant response and behavior without giving them a test or something else,*" said Miss B. Miss F further elaborated on Miss B's opinion, "*In a natural environment, like DIE class, we can see what students have learnt easily. For example, in a role-play, students can only doing it by knowing it,*" said Miss F. The analysis of student's learning outcome had been changed in DIE class. Indeed, the goal of teaching was also different in a DIE class. As Miss A reported, "*... I think students can have a window to represent themselves in DIE class, but everyone has different comprehension which means not all students can understand the content at the same time. In Chinese lesson, we used to set a plan and try to lead all the students achieve the learning outcome. After adopting drama teaching skills, even though I have set some plans and goals, I couldn't ensure whether the students learn anything from the lesson… Therefore, I think teachers have to change the mindset that there is no direct link between outcome based teaching and*

learning in a DIE class." The goal of teaching Chinese with drama skills, therefore, was to guide children's thinking and comprehension."

The course structure of the traditional and DIE teaching approaches had also been discussed. "*Using drama to design a course can help us to specify the focus of the course. For example, the main theme of the course is "autumn". We use drama teaching skills and narrow the theme into "rain" so that we can deepen our core knowledge and teach it to students*," said Miss H. Compare to traditional classroom learning, DIE could contribute in-depth classroom learning to students as the whole course would specify on one typical theme and through different activities to know more about the theme. Students therefore could have a detailed picture and gain a deeper understanding of the theme. Indeed, learning through drama this model could combine with other learning models. For instance, as told by Miss I, her kindergarten adopted learning through story as the main teaching model, and she found that DIE had a good match with this model. "*The skills learned from DIE class can strengthen our original course structure,*" said Miss I.

To conclude, teachers from three different schools did agree that students in DIE class were more motivated, energetic, and actively participating learners. This success was due to the supportive environment in DIE class and students were willing to raise hand and respond to teachers. Students were no longer a "receiver of knowledge" but

a “proactive learner”. Moreover, those teachers who teach DIE class supported that teaching in DIE could make them feel relaxed during teaching. “We have less pressure in teaching DIE. Furthermore, we are interested in teaching DIE and we enjoy in class, too.” Indeed, the importance of traditional classroom should not be underestimated and replaced. As Mr. C indicated, “*The relationship of DIE and traditional teaching is not a dilemma. Teachers can use DIE as a complementary role to traditional teaching. Something should be taught by teachers; therefore, if everything is thought by the students themselves, the role of teacher is meaningless*.” He also suggested a model of teaching: “*DIE class should be followed the traditional class teaching. For example, after teaching the materials that should be taught by teachers, teachers should adopt the drama skills and organize some drama activities, like role-play, which can lead the students to have an in-depth thinking on the learning materials.*” In other words, DIE class teaching can be used as a tool to supplement the traditional classroom teaching.

3.6.4 The interaction between teachers and students during the class and the discipline control

As mentioned in the previous part, both of the teachers and students were motivated in class. It was undoubtedly to know that there were more interactions in

class than before. Almost all teachers from the interview mentioned some examples regarding the interaction with students in class. Miss H indicated, "*Through the act and imitation, teachers and students have to question and answer more often. Moreover, students have to find something related to the topic from his/her own life experience.*" In fact, not just the interaction between teachers and students can be enhanced, but also among and within the students themselves. "*When a student hears about something he/she has met before from another student, he/she may have some ideas that may come from his/her true life experience or from the imagination after hearing to his/her classmate's story,*" said Miss H. Traditionally, teachers would function as a guide to lead student's thinking. By the use of DIE, students themselves can also be a guide of his/her classmates! Indeed, building up an atmosphere of learning from peers can lead the students to have more academic interaction and be autonomous learners in the long run.

Regarding the discipline control, teachers did agree that by establishing some rules or typical rhythm, for example, clap hand 3 times to remind students to stop talking and go back to the seat. Once the rules and routines have been set up, the classroom management can be under teacher's control. "*Ming Ri has taught us some skills of classroom management, for instance, using rattle to give signal to students to follow teacher's order. Or give some imaginative tasks to students, such as asking 10*

students to queue up and act as a snake," said Miss J. Therefore, even kindergarten students can follow rules by some interesting skills instead of punishment. As DIE was a play-based curriculum, how could the teachers strike a right balance between teaching and classroom management? Indeed, the situation was not that ideal that every student could follow rules. "*It takes time*," said Miss A, "*Even though a naughty student can still follow rules, but not in the first time*". Response from kindergarten teacher, Miss I did think that chaos was unavoidable sometimes. "*It is inevitable that the classroom will become noisy when students are discussing, arguing, acting and moving. But under a "secure" level, teachers can accept it*," said Miss I. In order to balance teaching and playing, Ming Ri did teach the teachers a useful method. "*Ming Ri has taught us a way to help the students freeze down their emotion so that both students and teachers can have a conclusion to the activities. Therefore, through this method students can think about what they have learnt and experienced from the activities,"* said Miss A, *"They should have something to bring home.*"

3.6.5 Enhancement of the generic skills

According to the Curriculum Development Council (CDC), proper school curriculum should help students to cultivate generic skills which are crucial for life-long learning. The transcripts revealed some main generic skills proposed by

CDC (Curriculum Development Council, 2000), namely, Collaboration Skill, Communication Skill, Self-Management Skill, Critical Thinking Skill, Problem Solving Skill, Numeracy Skill, IT Skill and Creativity. Each generic skill would be discussed as follows.

3.6.5.1 Collaboration Skill

In DIE class, students were constantly involved in different group works. From discussion to doing an act, students had to listen and coordinate with others. Therefore, after the DIE teaching, students were found to be cooperative with others effectively. "*In DIE class, the students who are more intelligent can help the weak students. However, sometimes those weak students are more creative than the intelligent students. Therefore, they can help each other and achieve a good and collaborative performance*," commented Mr. C.

3.6.5.2 Communication Skill and Self-Management Skill

As mentioned in previous part, discussion was a must in DIE class. Therefore, no matter how unwilling the students were, or how weak they were in language, they would still feel the urge to communicate with their classmates to achieve a group success. Through DIE, students did have improvement in talking, writing, reading and listening. Miss H stated that kindergarten students spoke carefully and more detailed. Also, they used more adjectives in a sentence. For example, the students would

describe the color and shape of an object instead of merely naming the object itself. Moreover, students could learn how to communicate with others in different ways in DIE class, namely, language, body, tools, emotion and voice. It was evident that CDC's expectation of student's communication could be fulfilled by DIE class.

Apart from strengthening the speech ability, Miss K indicated that students could learn how to respect others from a conversation: "*Every individual has his/her own ideas. What we can do is to respect and compromise for a group answer. DIE class can give the students a chance to practice how to communicate respectfully and politely with others.*" Echoing Miss K's opinion, Miss J thought that students had better self-management skills as they learnt how to listen to the others with patience and respect. Obviously, DIE can also be viewed as a way of moral education. Moreover, both drama and role-play required all students' cooperation, which meant that students should follow rules and control their behavior, emotion and thinking. This was quite a good practice for students to have better self-management skill.

3.6.5.3 Critical Thinking Skill

In CDC's perspective of critical thinking, students should build up the ability of justify right and wrong and have a standing point (CDC, 2000). In DIE class, students took part in different role play. They could act different characters so that they could think in a different way. Miss I pointed out that in kindergarten's upper class, when

students did a role play, they should observe, think and criticize differently when they were acting in different characters. This thinking style could help them to discriminate the concept of right and wrong. For example, students would start to think why teasing other was a wrong behavior. It was clear that studying in DIE class could enhance critical thinking.

3.6.5.4 Problem Solving Skill

DIE class could lead students to think in alternative ways to solve the problem. Miss Choi addressed, "*I have told the students a story. Afterwards, they couldn't think of any suggestion that can provide to the main character in the story to solve the problem. Therefore, we did a role play. I still remember that the story is about a snake help some animals to cross the river. Then, how can the snake itself cross the river? I told the students to act as the animals and discussed. After adopting different animal characters, they suddenly gave me a lot of interesting solutions.*" Miss G thought that this change was due to the role play. "*I think the students will have more imagination. They will think more deeply and develop the topics. In other words, they learn the skills of solving the problem.*" Miss J Yan, from another kindergarten echoed with Miss Choi's opinion that in her kindergarten, students did show the enhancement of problem solving skills.

3.6.5.5 Numeracy Skill and IT skill

Comparing with the traditional subjects, DIE class is undoubtedly more flexible and rich in the teaching context. Maybe teachers in English and Chinese lessons still focused their teaching on language and Mathematics teachers only focused on Mathematic, however, students could actually gain benefits from an integrated approach as teaching and learning in DIE class could provide. "*In upper class, we would add some current issues in the curriculum. For example, if there is an election, we would hold a role play in class and teach them how to count the vote*," said Miss I, "*Students can learn some practical skills in DIE class*." Besides, students could enhance their IT skills, too. "*Last time my students would like to know more about submarine in class, therefore, I asked them to find the information of submarine in the internet. On next day, they came back and presented to the class what they had found. Actually I know that starting from primary 1, students need to do presentations or show-and-tell. Hence, the skills of searching information on the internet can be an advantage for them to prepare for their primary study*," said Miss I. It was clear that a flexible curriculum, like DIE class, could enhance a holistic development in students.

3.6.5.6 Creativity

One of the greatest benefits of DIE can bring to students is creativity. Numerous of journals provided evidence for the use of Creative Drama and its positive effects on a person's personal growth. As O' Neill & Lambert (1982) indicated, DIE provides

the possibility for us to enrich our inner world by the language, feeling and thought; moreover, it increases our awareness and understanding of the outer world (O' Neill & Lambert, 1982). It is matched with CDC's expectation that providing a creative environment and cultivating a positive attitude towards creativity in school curriculum so that students can have a more creative mind. Mr. C provided us an example supporting this assumption: "*We always require the students to think and imagine something. Even we don't expect them to think, they would try to think differently to represent themselves. For instance, they would design some stage properties, or a sentence and a series of body movements to help their expression. It is clear to see that students do enhance a lot in creativity.*"

3.6.6 Cooperation with the school administration

The interviews revealed that the school administration from three schools did show a willingness to support teachers to use DIE. To conclude the teachers' opinions, their principals reserved much more time for the teachers prepared the class. Also, school administration from three schools did show a supportive attitude to the teachers that providing almost every resource which was required by teachers, like stage equipment and human resources. Miss A mentioned an example from her school: "*As a seed teacher, I would like to share my experience to more language subject's*

teachers. It is so hard to promote it through individual talk. My school is so helpful that invite some professional actors to hold a workshop for the interested teachers." Teachers had a positive reflection toward the help of school administrations. Apparently, till now there was little evidence showing that DIE cost too much school resources and affected the proper curriculum in an unfavorable way. In the present stage, school administration provided enough resources to teachers to operate DIE class.

3.6.7 Cooperation with the Institute collaborator

From the interviews, only the teachers from a primary school mentioned about receiving extra help in addition to the collaborator. "*As we all are not professional or experienced drama worker, we invite extra help from another drama association in order to teach the students more advanced drama skills. Receiving the help from the professionals, we can focus on the personal growth part. This operation model can make the education more effective,*" said Miss A. Indeed, teachers from all three schools did appreciate the help from Ming Ri in the education part. As Miss I reflected that the drama educators had taught her different skills on doing a better classroom management.

3.6.8 Suggestions to the Project

Overall, teachers commonly agreed that there were gains in educational strategies learnt from DIE class and these can be further adopted in many aspects of their teaching. And during the interview process, teachers showed their opinions on which parts in DIE should be reserved and improved. Almost 10% of the transcription content was regarded to this part. In the following sections, both parts would be discussed.

In the reserved aspect, the teachers had established a supportive attitude to keep using drama skills in normal class teaching. They thought that it was worthwhile to keep the whole teaching model. From their views, students thought and imagined more often after the DIE class teaching. For example, the kindergarten students in Miss F's class could now listen to the story and imagined the scene themselves without books and tools. Previously, students could only follow the teacher's idea by seeing some realistic objects. In fact, imagination could lead students to have a more creative mind and result in better academic achievement. A research showed that the elements in improvisational drama such as gesture, instant thoughts could stimulate the imagination and provide the types of experience that were essential for writing (Wagner, 1999). Therefore, whether the adults (teachers and parents) who aimed to

provide a stimulated and happy learning environment to the students, or whether the adults who focused on academic purposes such as enhancing the ability in writing, language learning and learning motivation, all of them could fulfill their needs and expectation when their children were using DIE in their studies.

Furthermore, teachers commented that the cooperation with Ming Ri Institute was a good model that worth to reserve. As mentioned previously, not all DIE teachers were experienced drama performer. The supervision and instruction from Ming Ri's drama educators did help the teachers a lot to learn about how to do role-play and facilitate student's thinking and expression ways. Ming Ri also provided many supplementary supports. As Miss K indicated, "*After giving us workshop and demonstrate a lesson, the artists from Ming Ri keep contact with us and answer us about the problem of the atmosphere control. They also send us some information about the DIE talk and invite us to join and listen to other successful exemplars*." With the guiding and supervision from Ming Ri, teachers could practise their drama skills and sharpen their teaching strategies. Consequently, students would be the ultimate beneficiaries.

For the improvement part, most teachers from the interview agreed that the advantages from DIE class were still more than the disadvantages. The reason was that the project of DIE was still in a starting stage. Therefore till now no significant

weakness or improvement could be reported. Only Miss I and Miss A did report that they would like to have more drama workshop and training to learn more drama skills in addition to those common skills.

To consider which parts should be reserved and which parts should be improved, Miss H indicated that it all depended on whether the core concept of DIE would match with the principles of the sponsoring body and Incorporated Management Committee of the schools. "*In order to fulfill the imagination process, we have to extend the teaching and learning to 5 days more. Actually, we originally have some expectations on our students except creativity. Therefore, we cannot focus on every part, both traditional teaching and DIE… It is not the problem of the project but a boarder question. We have difficulties to balance the curriculum instead of the problem from the project itself*," said Miss H.

3.6.9 Teacher's personal growth and enhancement

Possible personal growth and enhancements have been identified in the interviews. Over 8% of the transcription content has covered this question. Speaking of the personal growth, teachers commonly agreed that they were now more able to understand and appreciated their students. Reported by Miss D that teachers could have more chance to deeply observe and understand every student in DIE class,

including the less active and less intelligent students. They could discover that these students could have some profound and interesting ideas teachers never knew before. "*Teachers can know about the student's strengths through the drama activities. We can understand them more when they are not just sitting in class*," said Miss B.

One of the frequently reported enhancements was the benefit in teaching skills. Commonly, teachers did think that there was a breakthrough in their teaching strategies. "*I was so surprised that the skills we learnt in DIE class could apply to different classes, for example, arts lesson,*" said Miss H. To specify, Miss I did mention what skills she had learnt. "*Not just by the tone of the voice, but also the body movement, facial expression, and so on. These skills can match with our school-based curriculum – story learning. I think DIE class has enhanced my teaching skills*," said Miss I. Concluded with Mr. C's opinion, the teaching model has become multiple teaching instead of one-way teaching.

The last but not the least benefit which all teachers agreed was the relaxing teaching environment. "*Our principal reserves more flexible time for us to prepare for the class. And in the class, we can play with the students and enjoy the lesson with them,*" said Miss F.

3.6.10 Reasons for the teachers keep using the skills of drama-in-education

The present study revealed some reasons for the teachers keep using the skills of DIE. As usual, teachers reflected a lot of positive experience for explaining the reasons, including teacher's enjoyment, useful classroom management skills, the skills to motivate and stimulate student's ability, complementary to story teaching approach, positive and enjoyable learning environment, and so on. The way of drama education, therefore, was to give teacher's better teacher strategies in transforming knowledge and classroom management and provided children a simulative, happy and self-motivated learning environment.

4. Discussion

Integrating drama education into the formal school curriculum is a recent attempt in the educational reform in Hong Kong. Previous studies have shown that drama instruction has enhanced creativity performance in objective assessments and their communicative ability in story telling among Hong Kong primary school students (Hui & Lau, 2006), drama education was effective in raising verbal skills in students of various levels from different countries (Podlozny, 2000) and in learning geometry in mathematics in Turkish secondary school students (Duatepe-Paksu & Ubuz, 2009). Kindergarten and primary students and their teachers, as well as their counterparts in

special schools taking part in the present study have been benefited from the drama instruction in different ways.

Kindergarten teachers have perceived that students in the experimental group have displayed more dramatic and creativity characteristics when compared with students in the control group. They are more willing to volunteer to participate in classroom plays or skits. They can tell a story at greater ease and use both verbal and body languages to communicate their feelings. They are also good at identifying themselves with the moods and motivations of the characters in reading stories. It is evident by the teachers that learning through drama is effective in enhancing empathetic understanding and verbal skills of kindergarten children. This finding is consistent with the meta-analysis conducted by Podlozny (2000) indicating that drama instruction enhanced oral language development of students of all population, including kindergarten children.

Primary school students who have received drama enhanced curriculum have scored significantly higher in dramatic, creativity and communicative characteristics when compared with those who have not. Teacher-rating on creativity characteristics of students with special needs in drama enhanced classes also have made a more significant gain than their counterparts in the control group.

The performance in story telling task is less consistent than in the teacher rated

and self-reported creativity characteristics. Among the three groups of students, primary school students in the experimental group have reported the most significant gains in providing a coherent structure to the story, humorous elements and the overall story telling scores in the post-test. However these gains in the story telling task have not been observed in kindergarten students and students with special needs.

Generally speaking, drama instruction in language classrooms has traditionally been an effective strategy (Wright, 2001). Drama provides a context for students to use the language spontaneously, serves as an effective medium to practice reflective thinking, as well as a strategy to enhance growth in understanding of abstract concepts and human experiences (Verriour, 2001). Morgan and Saxton (2001), and Bolton (1979) commented that drama provided "a different order of experience" for teachers to plan their curriculum in which thinking/feeling has become a major concern. Morgan and Saxton (2001) have further developed a taxonomy of personal engagement in learning through drama. The various processes include interest, engaging, committing, internalizing, demonstrating, and evaluating. Drama is an effective way to encourage students to be attending, displaying eye contacts, listening attentively and reacting with supportive non-verbal responses. It is a good way to engage students to participate actively, identify with the characters and gaining satisfaction through engagement. The third process of committing is requiring

students to accept limits and responsibilities and emphathizing with the roles.

The drama instruction training offered to teachers by Ming Ri Institute of Arts Education aims at equipping teachers with knowledge and skills to be able to create drama with children in the classroom. They know and apply the teaching strategies and the form of drama. According to Wright (1984), teachers should be able to: "(1) form appropriate playable dramatic action for the group; (2) facilitate individual and group involvement in the drama; (3) guide individuals within the group towards understanding of the drama just created" (p.20). Teachers in the project adopt drama instruction in designing teaching and learning activities for students in their preschool and primary school curriculum in their language education.

Teachers participating in drama instruction have also demonstrated positive gains in their development towards a teacher fostering creativity. Drama instruction has encouraged teachers to foster independent and cooperative learning among students. It has also reminded teachers to suspend their judgment and enhanced flexibility in thinking during teaching. Students' self evaluation and opportunities for trials are provided. Moreover, teachers have also provided supportive evidence by showing that students' motivation in learning has been enhanced through drama in education.

From the qualitative interviews with teachers, participants have recognized that training and strategies in drama in education have also enabled them to become a

more effective and competent teachers. After the try out lessons, teachers have observed that academically less motivated and able students have benefited a lot because drama activities have provided them with a sense of security and aroused their curiosity in active engagement in classroom learning. They have also provided evidence in fostering various generic skills, for instance collaboration, creativity, critical thinking and etc. The drama instruction has brought positive effects on providing optimal learning experience for children by accepting individual difference.

However, there are a couple of limitations of the present study. The first is on the generalizability of the findings to other preschool and primary school children and special learners in other school settings. The background of the participating kindergartens, primary schools and the special school are mainly for those institutions which are eager to take part in creative and drama projects. The teachers are willing and voluntary to attend drama training for their professional development. Their students are mainly from lower to middle income families. Their experience and exposure to drama and creative activities may influence the effect of the drama in education project. The second limitation is on lack of explanatory power of the transfer from drama learning to academic achievement. Future studies on how participants integrate their drama experience with their academic knowledge and with their social and interpersonal knowledge may be worthwhile pursuing.

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