CHAPTER 4

FINDINGS AND DISCUSSION

This chapter presents the findings of the study related to the research objectives and discussions of the results. The data were analyzed qualitatively and quantitatively. Discussions based on research findings were made at the end of each research objective.

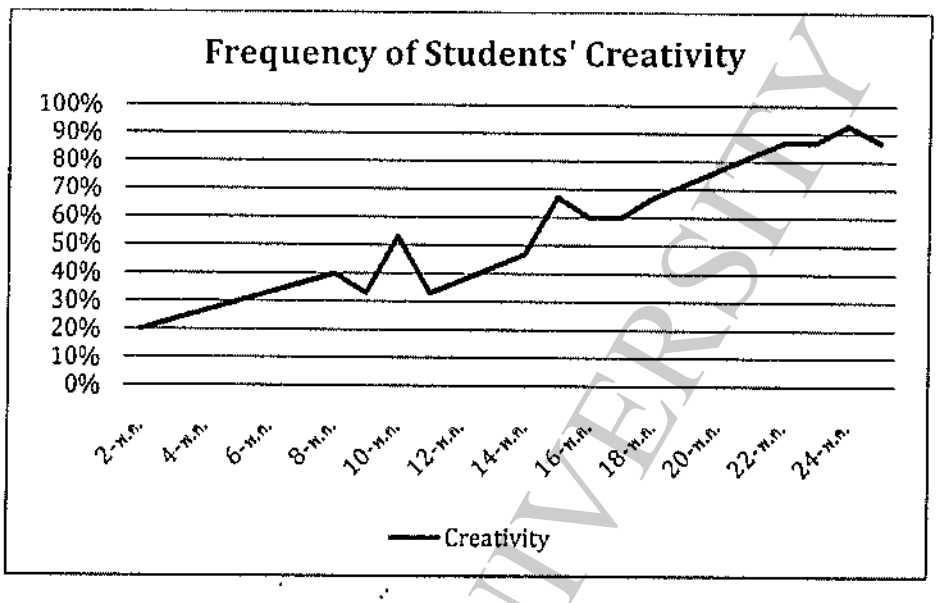
4.1 Findings Report of Objective 1

Objective 1 is to study the effectiveness of promoting the divergent thinking of primary school students through learner-centered activities. The instruments that were used to reveal the findings of objective 1 are classroom observation and experts' evaluation of students' works.

4.1.1 Classroom Observations

The classroom observation consisted of a checklist and an observation log. The classroom observation checklists were checked for characteristics of linguistic creativity shown by the students. That means that the higher the frequency, the most creative they were being throughout the lesson. They were checked and at the end of the lesson, where they were analyzed in order to improve the learner-centered

activities and materials for the next classes. The frequency counted from the classroom observation checklist was computed through the statistical analysis software SPSS. The results can be seen in Graph 1.



Graph 1 Frequency of Students' Creativity Throughout the Study

As it can be seen from Graph 1, the frequency goes up during the study, with a few exceptions. This shows that students showed more creative characteristics as the implementation of the lessons was being done. As seen on the graph, the variation between an earlier day having a higher frequency of creativity than a later day can be attributed to the type of activity used, as explained below.

When brainstorming was used, a linguistic creative pattern was seen, where when students could touch objects they had to brainstorm about, their linguistic creativity was higher than when they had to brainstorm about abstract concepts. On May 8th students brainstormed from a variety of stimulus where they could touch materials such as straws and water bottles, and then come up with ideas, however, on May 9th they brainstormed for the abstract concept of creativity which many never heard of before, and therefore the less amount of creative behaviors occurred. Piaget's theory of cognitive thinking (1983) supports the idea that children tend to think very concretively and only in the later stages of childhood they are capable of understanding abstract concepts.

When classroom discussions were used, it was clear that students needed a stimulus in order to activate their linguistic creativity, however, when given too many stimulus, especially linguistic stimulus, their linguistic creativity decreases. On May 11th, students took part in a discussion where they had access to the laminated pictures of a story, together with the writings about the story. Their creativity could possibly have been hindered because the materials already presented imagination and left little room for students to use their own ideas. Such learner-centered activity would better enhance students' divergent thinking if it was done without the writings of the story as for the students to use their own imagination to think about what was happening, by using the pictures. The already composed writing of the story that they were exposed to could have demotivated students to think for their own sequence of the story, and only follow what the author had come up with.

On May 16th and 17th, students were exposed to the same set of materials used in May 15th, and therefore they might have gotten bored of using the same laminated materials, therefore decreasing their creative characteristics.

As for the 25th of May, for example, the Instances Tests were being held, students showed less apparent creative characteristics (F=13) than the 24th (F=14), when they were given time to work on their poster on the meaning of creativity and time to write their own story.

These results were also apparent throughout the classroom observation logs, where students were reported to be more aware of what creativity is, often reminding themselves that they should be creative and that there are no wrong answers, where therefore everyone's opinions was valid and should be respected. The classroom observation logs were used in complementation to the classroom observation checklist, where students' behaviors were observed. The observable behaviors found in the classroom observation log in learning English can be concluded as confidence, autonomy, resourcefulness, open-mindedness and experimentalism.

4.1.1.1 Confidence

Throughout the study there were days where the learner-centered activities did not work as well as planned, and therefore had to be changed, as they did not promote students' confidence. When students were asked to talk about characters, and were given individual characters to talk about, they were not interested and not much discussion happened. However, once the activity was adapted and students were given a set of characters to discuss, they rapidly worked on making new characters by combining their body parts. Everyone was excited to show their classmates the characters they had come up with, and therefore a lot of classroom

discussion happened, getting students to become more confident as the classroom discussions occurred.

It was also seen that Subject 3 often insisted that if something was not real it was not correct, as when he said that "we cannot make a bracelet out of straws because I never saw one before", or "that is not the correct answer, right Miss Tati?", where other students often mentioned that "it is alright, it's our imagination so it is not wrong". This shows that although other students were starting to comprehend the concept of creativity in the language classroom, Subject 3 was still trapped in a concept where creativity is not acceptable, perhaps from his cultural background. However, as the lessons progressed, students were more confident and asked fewer questions to the teacher when a problem arose.

Activities such as group work, storytelling and role-play were all very important for the students' confidence to be developed. All the three activities allowed students to feel comfortable in the setting they were working and with their peers. The activities enabled students to feel that there was no pressure being put on them, as the atmosphere was very informal and friendly. Without being afraid of being put under the stop or losing face, the students were empowered to share their thoughts and ideas, without worrying about making mistakes. (Smart and Csapo, 2007; Jones, 2007; Robinson, 2011; Byrd, 2009; Kirubahar and Subashini, 2011)

4.1.1.2 Autonomy

It was apparent from the observation logs that in the first few lessons students often asked for approvement form the teacher by asking whether or not their work was correct, good enough or spelled correctly .Students often stopped their work to ask for spellings, and none of them was able to work independently for the first few lessons. On the third lesson, when student began their poster on

what it meant to be creative, there was a lot of class discussion where students encountered a lot of new vocabulary from their classmates. They brainstormed for the meaning of creativity and came up with the following ideas, seen on Figure 3.

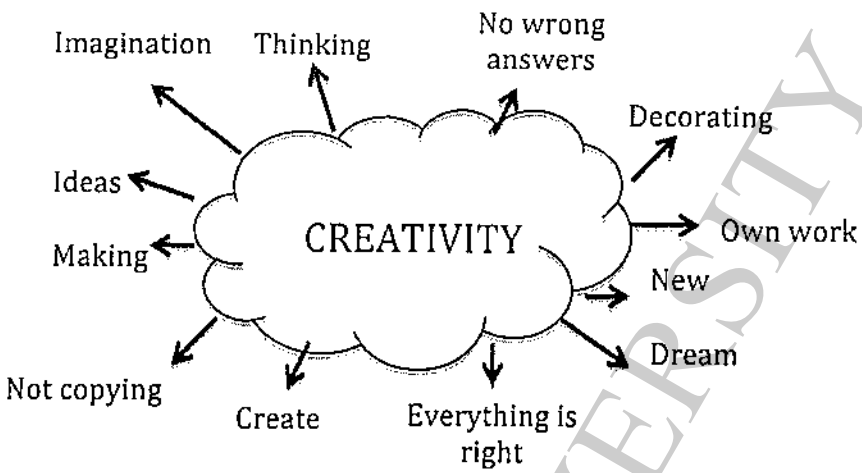


Figure 3 Students' Brainstorming the Meaning of Creativity

Throughout making the poster, Subject 3 expressed that he did not like doing that work, and so he was allowed to work on something else. He decided to make origami to decorate the poster, which other students appreciated and triggered them to want to show that they too could do unique things. The girls encountered problems such as who would write the vocabulary "creativity" in the poster, as both of them wanted to. After a few trials and a lot of discussion they came up with their own solution to the problem.

The last week of lessons showed that, although students relied less on the teacher, they still asked questions such as "can we be creative?" or "are we allowed to be creative?", showing they became more autonomous. When students wrote their last story, Subject 3 mentioned that it had no ideas on what to write, but the other students emphasized that Subject 3 had to use imagination in order to have ideas. It was very clear that students asked fewer questions to the teacher,

without stopping often to ask for spelling or whether or not they were doing the right thing. They had discussions with more contents in the last week without relying on the teacher's thinking questions to keep a discussion. They were also interested to know if they had become more creative by the end of our lessons, and were sad to know when the lessons were over.

Group work, storytelling and story writing all aided in the development of students' autonomy. Such activities allow students to work individually and in groups, being comfortable with working without the aid of the teacher or other classmates. While working in groups, students brainstormed and discussed about different topics and stimuli, while the teacher is able to work as a facilitator emphasizing that all students have the right to give their opinions while others have to listen and respect it. Such method allows students to be free from mistake stigmatization and allow them to feel comfortable, without relying on the teacher to know whether or not the work done is acceptable. Working individually allowed students to apply their autonomy without relying on anyone, even on their classmates' opinions. It permitted students to quietly organize their ideas. (Smart and Csapo, 2007; Jones, 2007; Robinson, 2011; Byrd, 2009; Kirubahar and Subashini, 2011; Guilln and Bermejo, 2011)

4.1.1.3 Resourcefulness

Students often seek approvement from others. When making mistakes, they were comfortable with correcting it without losing face, helping each other, as seen on the dialogue below. The dialog was present during the making of the poster.

Subject 5 said: "I too"

Subject 3 said: "Me too, Subject5. Not I too."

Subject 5 said: "Oh ok. Me too."

Everyone: "It's me too, not I too."

This shows that although students are not explicitly learning grammar, they acquire it by taking part in learner-centered activities which they enjoy and class discussion. They discuss the language in a setting close to that of a real life situation, where mistakes are not stigmatized, giving space for correction without pressure. This characterizes students' autonomy and resourcefulness, where they solved the grammar mistake problem on their own without turning to the teacher for advice, but instead, using each other's knowledge in order to build upon their own knowledge.

Resourcefulness was fostered mostly throughout group work and role-play. Students were encouraged to build on each others' responses and give their opinions rather than wait for the teacher to punish them or correct them when a mistake was made. By allowing students to work independent of the teacher, they fostered their own sense of leadership, where when they thought a mistake was being made they would promptly help their peers, without losing face. Role-play allowed them to feel comfortable due to the fact that if they did make a mistake, they were in a position where they were seen as the character, rather than themselves. (Smart and Csapo, 2007; Jones, 2007; Robinson, 2011; Byrd, 2009; Kirubahar and Subashini, 2011; Guilln and Bermejo, 2011; Xenia, 2011)

4.1.1.4 Open-mindedness

Although as the lessons followed students were more understanding of the concept of creativity and that everyone could give their opinions without being wrong, Subject 3 still did not feel comfortable with that approach. When students took part in an activity where they came up with a story based on the pictures, they were interested to know how the author had written it. In the story by the children, they saw the main character, a wolf, as a good and kind character; however, the author had portrayed him as a mean character. That immediately triggered Subject 3 to say "we wrong, wolf is bad guy". Then other students in the classroom said that they were not wrong, that the wolf was a mean character in the writer's imagination, but a kind character in their own imagination. That triggered a class discussion, where once again students used the language they will encounter in real life situations, and although they did not use perfect grammar, they used English communicatively. The learner-centered activities gave an opportunity for that to take place. Students accepted ideas from other classmates, however, Subject 3 had difficulties being open-minded, and although his behavior was still present at the end of the study, it had diminished greatly from the beginning of the study.

Students took the time to discuss the stories, such as when discussing the wolf's age. Below is the dialogue.

Teacher: How old do you think the wolf is?

Subject 5: 10 years old.

Subject 3: Nooo! He is no 10, he is 3 years old!

Other students: Nooonoo, why you think that?

Subject 3: He play teddy, I don't play teddy. He is baby.

This shows students process of thinking about the story as well as using their real life experiences to solve the problem of "how old is the character". While some students used their imagination to come up with an age, Subject 3 used a real life example of why the other students were not correct according to his point of view. This was part of the learner-centered activities and opened a door for discussion. Although Subject 3 was not open-minded to accept his classmates' ideas on the topic, the other students were open-minded to Subject 3's input. Situations where students were accepting of others' opinions were more apparent as the lessons progressed.

Group work fostered open-mindedness the most. When working in groups, students were automatically required to deal with different opinions given by group members, where sometimes although not agreeing, they seek an explanation in order to understand different points of view. By listening to the explanations they are more prompt to understand different points of view and therefore being open-minded. (Smart and Csapo, 2007; Jones, 2007; Byrd, 2009; Kirubahar and Subashini, 2011; Xenia, 2011)

4.1.1.5 Experimentalism

As the lessons progressed, students were more confident and therefore experimented with the vocabulary, ideas and expressions throughout the lessons. Students began to comment on their classmates ideas and works by saying "Subject x is so creative" or "you are not creative, you copy". The dialogue below happened on the second last class, when students were discussing about characters in their settings.

Subject 1: The fairies are angry because the bad guy in the forest want to kill their friends. They have animal friends. They can talk.

Subject 5: Yeah, yeah, and they have plan. Destroy bad guy.

Subject 3: It can't be like that because it's not real.

Subject 1: Yes it can, it's our imagination.

Subject 4: Yeah, Subject 3, it is creativity.

The dialogue above clearly shows that students are more aware of creativity and experimenting with it, with the exception of Subject 3, which is intriguing as when he comes up with characters he normally writes about monsters, which to some might not be seen as real.

Experimentalism could be found mostly in role-play activities and storytelling. Students were enabled to share ideas and experiment with different stories and characters. Such activities facilitated them to play with their imagination and play with different possibilities, always enabling them to go back and change their ideas and thoughts if they considered necessary. (Guilln and Bermejo, 2011)

Finally, as it can be seen from the classroom observation logs, primary level students had a vast number of opportunities to use English communicatively throughout the learner-centered activities, and often did so. They increased their linguistic creativity and linguistic performance through their increase in confidence, autonomy, being resourceful, open-minded and experimentalists. They helped each other solve problems and improve their language skills by correcting one another. By using the learner-centered activities students were

enabled to use a very similar language as to the one used in everyday life, if not the same.

4.1.2 Experts' Evaluation of Students' Work

The Experts' Evaluation of the end products was done by three experts, according to their background on creativity. They evaluated three products, where each one was from a different time period: from Lesson 1, Lesson 8 and Lesson 11. The results of the experts' evaluation of the end products were reported by the mean and standard deviation results. Table 18 below shows the overall results from three works of each student, from the evaluations given by the experts.

Table 23 Experts' Evaluation of Students' Work Results

	Lesson 1	Lesson 8	Lesson 11
Fluency	1.60	1.93	2.00
Flexibility	1.40	1.67	1.93
Originality	1.53	1.80	2.13
Elaboration	1.40	1.53	1.93
Mean	**1.48**	**1.73**	**2.00**
S.D.	**0.100**	**0.172**	**0.094**
Interpretation	**Low**	**Average**	**Average**

As it can be noted from Table 23 above, students' works have shown to increase in divergent thinking skills throughout the lessons. In Lesson 1, students' divergent thinking was evaluated to be low (M = 1.48), whereas in Lessons 8 and 11 it was interpreted to be average, (M = 1.73) and (M = 2.00). Although within the interpretation there was no change between Lessons 8 and 11, looking at the mean results shows that there is an increase in divergent thinking. The results from Table 23 conclude that students' divergent thinking increased throughout the implementation of the lessons.

4.2 Discussion of Findings of Objective 1

Classroom observations and the experts' evaluation of the end products were used in order to analyze the effectiveness of promoting the divergent thinking of primary school students through learner-centered activities.

Classroom observations were done through the classroom observation logs and classroom observation checklists. They served to observe students' pattern of creative behaviors throughout the lessons.

The classroom observation checklist used throughout the study was composed of creative characteristics that are said to be present within creative individuals. (Harrington, 1990; Runco, 1990; Gedo, 1990) It can be seen from the results that students' creative characteristics have increased throughout the lessons, which can be attributed to the learner-centered activities applied with the students. Learner-centered activities such as brainstorming and role-play allowed students to imagine new situations and be confident to take risks, which also increase students' divergent thinking. (McMahon and O'Neill, 2005; Jones, 2007) Such traits also aid students in their path towards English learning, where confidence is essential in order to use the language.

As the lessons progressed, students' awareness of the creative concept increased, as seen in the classroom observation logs, with students repeatedly saying that they should be creative and that there were no wrong answers, and so did their creative characteristics. This can be attributed to the activity where students brainstormed for the meaning of creativity, where a class discussion occurred and student discussed about creativity and its benefits. By designing their poster on creativity, students experienced a sense of autonomy, which motivated them. The class discussion generated a good setting for communicative English

language to be used, where students picked up new vocabulary from one another. (Hall, 2006) When designing the poster and being invited to work autonomously, students were exposed to an atmosphere very close to real life situations, which gave them the opportunity to experience the language they will use every day, rather than the language they would only use in the English classroom otherwise. (Jones, 2007)

On the last lessons students' creative characteristics ranged between 87% and 93%. That was possible due to the implementation of the learner-centered activities, which allowed student to become autonomous, to use their imagination, to independently solve problems that they encountered, to take action for their own learning, to brainstorm and to take part in classroom discussions, all of which increased their divergent thinking skills. Not only were such learner-centered activities suiting to students' needs and preferences, but they also increased students' creativity, while using the English language communicatively. Students' creative characteristics were higher by the end of the study because they had been continuously exposed to the learner-centered activities which fostered a variety of different skills also present in divergent thinking. (Jones, 2007; Hall, 2006; Froyd and Simpson, 2010; James, 2010) These were done through not only speaking, but also through listening, reading and writing in the target language. (Runco, 1990; Amabile, 1990; Runco, 1991)

From the results of the classroom observations, it indicates that throughout the study the learner-centered activities had effectively promoted the divergent thinking and creativity of the primary school level students whom participated in the study.

Regarding the experts' evaluation of the end products, it was also used to study the effectiveness of promoting the divergent thinking of primary school students through learner-centered activities

Three experts, whom have had previous involvement with creativity, did the Experts' Evaluation of the end products. They investigated three works from three different time periods. The purpose of this instrument was to investigate if students' divergent thinking had changed throughout the application of the learner-centered activities to the primary school level.

The results showed that students' divergent thinking increased throughout the lessons, where in Lesson 1 students had low divergent thinking skills (M = 1.48), and both in Lesson 8 (M = 1.733) and in Lesson 11 (M = 2.0) students had average divergent thinking. These results show that the usage of learner-centered activities gradually increase students' divergent thinking due to the characteristics they share in common, such as autonomy, risk-taking and confidence. By continuously exposing primary level students to learner-centered activities, such as asking them to brainstorm about different topics, always emphasizing that when they asked questions they should think about it on their own or asking them thinking questions to guide them towards the answer, their autonomy, motivation, imagination, problem-solving skills, active learning, brain storming and risk-taking skills improve, therefore enhancing their divergent thinking. As a result, primary level students' English improves by inviting them to think in the language, rather than readily giving them the answers.

The end product of Lesson 1 was a story written individually by the students in the first day of class, in Lesson 8 the end product was done individually as a list of brainstorming on a character, and in Lesson 11 the end

product was a story written individually by the students in the last day of class. The end products from Lesson 1 and 11 involved students to write creatively, using their imagination, autonomy and motivation in order to write their own stories. The end product of Lesson 8 involved students sharing ideas at first, and then using their student-centered skills to brainstorm characteristics of characters. The qualification of the experts in the divergent thinking skills area was essential, as Craft (2005) argues that researchers such as Csikszentmihalyi, Feldman and Gardner emphasize the importance of experts in a field of knowledge to recognize a work as being creative, as that shows a difference from what is commonly accepted to be the norm to what is creative in that area. The experts chosen are from the field of English teaching, highlighting that the learner-centered activities used with the primary school level ESL students throughout the study improved their divergent thinking in the language classroom, where the learner-centered activities were directed towards English language learning as well.

It can be concluded that the experts' evaluation of students' end products show that the learner-centered activities have effectively promoted the divergent thinking and creativity of the students whom participated in the study.

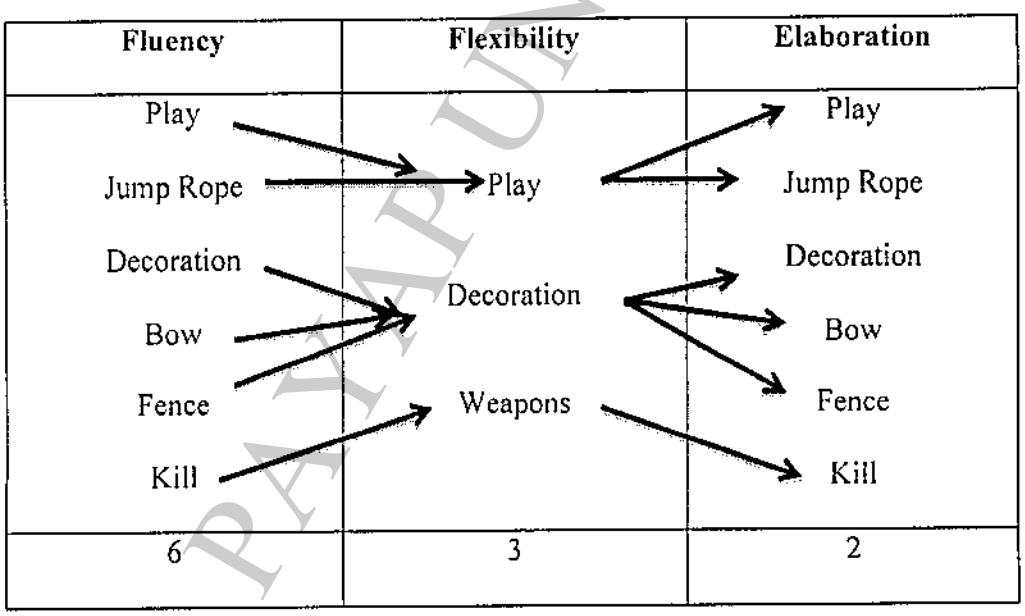
4.3 Findings Report of Objective 2

Objective 2 is to investigate students' capacity for expressing creativity before and after the implementation of the learner-centered activities. Two instruments were used in order to report the findings of objective 2, the Instances Tests and the Teachers' Evaluation of Students' Creativity.

4.3.1 Instances Test

The Instances Test was given before and after the study was done. Questions asked in the tests were composed of Instances questions, Uses questions and Similarities questions. They were given through a class discussion, and through individual work. A sample on how results were calculated can be seen below through the responses from Subject 2 as seen on Table 24, which can also be found in Appendix I. Although Subject 2 used drawings as a form of expressing his ideas, he was interviewed and asked to explain what the drawings meant. From the interview and the Instances Test the results from Table 24 were gathered.

Table 24Student's Responses to Question 1 Pre-test:



From the answers shown in Table 24, the Fluency of the responses is 6, because there are a total of 6 responses. The responses can be put into three different categories: play, decoration and weapons, therefore it has a Flexibility of

3, and therefore each one of them has a mean Elaboration of 2, 6 responses divided by 3 categories. From the six responses the student provided, five of them were not found in other students' responses of Question 1 and were therefore considered to be original. For question 1 in the pre-test, there was a total of 25 answers given by the students, and if 5 of them were original, calculating its percentage showed that in that question the student was 20% creative. Subject's 2 responses to Question 1 in the pre-test were mostly done through drawings, and therefore the researcher had to ask each subject to explain what were they to make sure that the drawings were interpreted properly, as it was done with all the other subjects which included drawings in their responses.

Table 25 shows the mean results of the Instances Test, where results were based on students' class discussion to the questions in the form of speaking, following the Instances Test guide.

Table 25 Class Discussion Instances Test Results

MEAN SCORES		
ELEMENTS OF DIVERGENT THINKING	TOTAL SCORES	
	PRE-TEST	POST-TEST
Originality	-	-
Flexibility	7.33	5.33
Fluency	13.66	20.33
Elaboration	1.86	3.83

As seen above in Table 25, the results before the application of the lessons were lower than the results after the application of the lessons, with the exception of Flexibility, which lowered from 7.33 categories to 5.33 categories. Fluency

increased from 13.66 responses to 20.33 responses, meaning that student came up with a greater amount of vocabulary, expressions and ideas, and Elaboration increased from 1.86 responses to 3.83 responses, meaning that each category they have come up with contains a greater number of vocabulary, expressions and ideas.

It can be concluded that the students' Fluency and Elaboration increased when they worked in group discussion. This means that students were able to come up with a higher number of vocabulary, expressions and ideas within each question in the Instances Test when they helped each other elaborate their ideas. However, Flexibility has decreased, which shows that each category students come up with has a higher elaboration, therefore having more vocabulary, expressions and ideas. When students work in activities that involve collaborative learning they are able to gather ideas suggested by their classmates and elaborate on them. If the work had been done individually students might not have thought of these ideas, but when discussing them they take one idea and elaborate, rather than giving up on that idea and moving on to a new one. That explains why Flexibility is lower, as students elaborate more when working collaboratively.

Table 26 shows the mean scores of the Instances Test, where results were based on students' individual responses to the questions, following the Instances Test guide. (See individual scores in Appendix J)

Table 26 Individual Instances Test Results - Originality

MEAN SCORES		
ELEMENTS OF DIVERGENT THINKING	TOTAL SCORES	
	PRE-TEST	POST-TEST
Originality	6.87%	10.3%

As you can see in Table 26, Originality increased from 6.87% in the pre-test to 10.3% in the post-test, showing that the ideas, vocabulary and expression students responded with were more innovative in the post-test than in the pre-test.

Table 27 Individual Instances Test Results – Flexibility, Fluency and Evaluation

MEAN SCORES		
ELEMENTS OF DIVERGENT THINKING	TOTAL SCORES	
	PRE-TEST	POST-TEST
Flexibility	3.07	4.37
Fluency	5.1	9.36
Elaboration	1.67	2.14

Table 27 shows that Flexibility has also increased from 3.07 categories to 4.37 categories, meaning that students thought of a greater range of categories for their responses. Fluency greatly increased from 5.1vocabulary, expressions and ideas to 9.36, meaning that students were able to come up with greater number of instances, uses and similarities for the questions given. Elaboration increased from 1.67vocabulary, expressions and ideas to 2.14, meaning that students were able to explore more ideas, vocabulary and expressions from the categories they used.

The findings showed that Originality, Flexibility, Fluency and Elaboration have increased when working individually, meaning that students' divergent thinking has increased after the implementation of the learner-centered activities, shown through their vocabulary, expressions and ideas responses for the Instances Tests.

When observing the differences of students' divergent thinking between class discussion and individual work, the mean scores were compared, as shown in Table 28.

Table 28A Comparison between Class Discussion and Individual Work Instances Tests Results

ELEMENTS OF DIVERGENT THINKING	PRE AND POST TESTS	Class Discussion	Individual Work
Flexibility	Pre-test	7.33	3.07
	Post-test	5.33	4.37
Fluency	Pre-test	13.66	5.1
	Post-test	20.33	9.36
Elaboration	Pre-test	1.86	1.67
	Post-test	3.83	2.14

In Table 28, it can be seen that the mean scores in divergent thinking between students' class discussion and students' individual work were different. It shows that when a class discussion was used in order to assess divergent thinking through the Instances Test, students' responses were higher than when assessing divergent thinking individually. Thus, the results conclude that students are more creative when working in groups rather than individually, and have the ability to

come up with a greater number of vocabulary, expressions and ideas in their responses to the questions.

The Instances Tests were also analyzed individually, for qualitative characteristics that show an increase in linguistic creativity between the pre and post-tests. (A sample of students' works can be found on Appendix I).

All subjects had shown an increase in linguistic creativity. Students' language production increased, being shown in the amount of vocabulary produced by students. On the pre-tests students showed their creativity mostly through drawings, however, on the post-tests students either only wrote their responses or wrote and drew in order to support the written response. Furthermore, it is clear that not only the number of responses has increased, but also the language production and the linguistic creativity has increased. When students were not sure how to spell vocabulary they took risks and tried to spell them on their own throughout the post-tests, whereas in the pre-tests students often relied on the teacher by asking how to spell vocabulary. An example is Subject 1, who has shown an increase in the number of risk-taking between the pre and post-tests. It is clear from the responses that Subject 1 tried a higher number of vocabulary, expressions and ideas on the post-test, however, risk-taking can be seen from the amount of crossed vocabulary found on the post-test, where the student played with the vocabulary and crossed those she was not content with. That shows that Subject 1 was playing with her linguistic creativity which increased from the pre-test to the post-test. Subject 2 is a very clear example on the increase of language production and linguistic creativity. On the pre-test questions, Subject 2 mostly used drawings to convey creativity, however, on the post-test questions the student only drew pictures on the last question and

in order to support the written answer, showing an increase in vocabulary usage. Not only has the student's linguistic creativity increased, but also his ability to use vocabulary. All students showed the same pattern of improvement, showing increases in creativity in the English language.

4.3.2 Teachers' Evaluation of Students' Creativity

Teachers were given Teacher's Evaluation of Students' Creativity (TESC), which they answered following a five criteria likert-scale. They were required to take the questionnaire before and after the implementation of learner-centered activities. Before the evaluation was given, they were advised to note the differences in behavior and creativity during the process of implementation of the learner-centered activities. Questions were classified between creative and non-creative, where questions 3, 6, 10 and 14 were guided towards non-creative behaviors, and the 21 other questions were guided towards creative behaviors. The results of the teachers' evaluation of students' creativity are shown in Table 24 below.

Table 29 Individual Teacher's Evaluation of Students' Creativity, Towards Creative Behaviors

	Teacher 1			Teacher 2		
	Mean	S.D.	Interpretation	Mean	S.D.	Interpretation
Pre-test	3.13	0.383	Considerably	2.97	0.219	Considerably
Post-test	3.57	0.314	Very much	3.45	0.257	Considerably

In Table 29, Teacher 1's results show that before being exposed to the learner-centered activities, students were considerably creative (M = 3.13), whereas after being exposed to them, they became very much creative (M = 3.57).

Teacher 2's results show that both before and after the learner-centered activities students were considerably creative. The average of the mean scores from the two teachers is presented in Table 30 below.

Table 30Average Teachers' Evaluation of Students' Creativity, Towards Creative Behaviors

	Teacher 1 and Teacher 2		
	Mean	S.D.	Interpretation
Pre-test	3.05	0.265	Considerably
Post-test	3.52	0.281	Very much

The results from Table 30 show that the results from both teachers have increased, meaning that students creativity have increased after the implementation of the learner-centered activities, with students being considerably creative (M = 3.05) before the implementation of the learner-centered activities, and very much creative (M = 3.52) after the implementation of the learner-centered activities.

Thus, the results of the teachers' pre/post-evaluations it can be concluded that primary level students' creativity has increased after the implementation of thelearner-centered activities.

When evaluating the students' non-creative behaviors, Table 26 below represents questions 3, 6, 10 and 14

Table 31 Individual Teachers' Evaluation of Students' Non- Creative Behaviors

	Teacher 1			Teacher 2		
	Mean	S.D.	Interpretation	Mean	S.D.	Interpretation
Pre-test	2.55	0.325	Considerably	2.9	0.335	Considerably
Post-test	2.2	0.410	Slightly	2.3	0.273	Slightly

Table 31 shows that both teachers considered students to be considerably non-creative before the implementation of the lessons (M = 2.55) (M = 2.9), and slightly non-creative after the implementation of the lessons (M = 2.2) (M = 2.3). This shows that the employment of the learner-centered activities reduced students' non-creative behaviors. Table 32 below shows the overall mean scores of the teachers' evaluation of students regarding their non-creative behaviors, representing questions 3, 6, 10 and 14.

Table 32Average Teachers' Evaluation of Students' Non- Creative Behaviors

	Teacher 1 and Teacher 2		
	Mean	S.D.	Interpretation
Pre-test	2.73	0.270	Considerably
Post-test	2.25	0.318	Slightly

Table 32 shows that students were considerably non-creative prior to the implementation of the lessons (M = 2.73), and slightly non-creative after the implementation of the lessons. The results indicate that students' non-creative characteristics have lowered after being exposed to the learner-centered activities.

4.4Discussion of Findings of Objective 2

The Instances Tests and the Teachers Evaluation of Student Creativity were used in order to investigate students' capacity for expressing creativity before and after the implementation of the learner-centered activities.

The pre and post Instances Tests were administered with the students. The pre and post-tests administered were an adaptation of the Instances Test from Wallach and Kogan. (Runco 1991) The results were calculated for Originality, Flexibility, Fluency and Elaboration, using questions soliciting Instances, Uses and Similarities.

Most post-test results have shown an increase in students' responses both regarding linguistic creativity and language production. Originality was calculated through the students' individual works, where a comparison of their responses was done. Although an idea might not be new for the world, it can be new for the child if the child came up with it, and therefore considered creative. (Epstein, 1990) Class discussion did not originate Originality results because the class came up with one set of ideas together, not having any other sets to compare its originality with. The individual results showed an increase in Originality, from 6.87% of the vocabulary, ideas and expressions being original in previous to the implementation of the learner-centered activities to 10.3%. This means that students were capable of thinking of different responses from their peers, which can be attributed to the skills in which the learner-centered activities fostered in the students. The skills such as autonomy, imagination, problem solving, brainstorming and risk-taking were fostered throughout the learner-centered activities, which allowed them to share ideas rather than sit and listen to the teacher. (Guilln and Bermejo, 2011; Smart and Csapo, 2007) Autonomy allowed

students to think on their own, without consulting their classmates for ideas played an important role in Originality. (Jones, 2007) Imagination allowed students to think of different Uses, Instances and Similarities responses allowed them to think outside the box. Problem solving skills gave them the ability to solve questions that may have raised throughout the activity, allowing them to have more time to think of new vocabulary in their responses, rather than stopping to ask the teacher. Brainstorming skills encouraged them to link ideas given by their classmates to their own ideas, encouraging them to think of new ways that they had not thought of before. And risk-taking skills gave students the confidence to take risks and be opened to the new concepts that the researcher or their classmates might suggest. (Kirubahar and Subashini, 2011; Xenia, 2011; Byrd, 2009)

The Flexibility results of the class discussion were an exception and declined, going from 7.33 categories of ideas, vocabulary and expressions to 5.33 categories. This decrease shows that within the vocabulary, expression and ideas students produced, there were less conceptual categories. Although an increase in Flexibility shows an increase in divergent thinking, this reduction can be explained by the group discussion factor. Since students elaborated more on the ideas that were given by their peers, they did not spend time thinking of other categories as much as they would if they worked individually. In their individual work, students' Flexibility increased from 3.07 to 4.37 categories, showing that when working independently students do not elaborate each category as much, but come up with a higher number of ideas that belong to different categories. This means that students explored a wider variety of vocabulary within the language, rather than restricting themselves to one category of vocabulary. Students' behaviors throughout collaborative learning activities were to support the ideas

given by their classmates, building upon them, rather than jumping to ideas of different categories. Students built and elaborated on each other's ideas. (Amorim and Infesta, 2009)

Furthermore, Fluency increased from 13.66 vocabulary, ideas and expressions to 20.33 during the class discussion and from 5.1 vocabulary, ideas and expressions to 9.36 during the individual work, showing that after the students were exposed to the learner-centered activities they were equipped to think divergently and come up with more ideas based on one stimulus. Students were capable of using their imagination to come up with new ideas and took risks to suggest ideas that were unusual. Also, they became autonomous and were more confident. The learner-centered activities, such as the brainstorming, done throughout the lessons equipped students to think of a variety of different responses to stimuli. (Xenia, 2010; Guilln and Benejo, 2010) Moreover, the classroom discussions allowed them to understand that problems could be solved and taken from a variety of different points of view, where oftentimes more than one answer is acceptable. Similarly, role play showed them that the way they saw and understood a dialogue could be very different from the way other people did, experiencing at first hand that it was acceptable in language to have more than one answer only. (Kirubahar and Subashini, 2011)

Additionally, Elaboration, the number of vocabulary, ideas and expressions within each conceptual category found in Flexibility, has also increased both in the class discussion from 1.86 vocabulary, ideas and expressions to 3.83, and in the individual works from 1.67 to 2.14 vocabulary, ideas and expressions. This growth in responses can be attributed to brainstorming, imagination, and confidence. (Runco, 1991) Students were trained to take one

stimulus and develop ideas from it, brainstorming for vocabulary, expressions and ideas. They used their imagination, where throughout the learner-centered activities students were encouraged to imagine and use English to express new ideas. If the ideas were not well accepted by their classmates they were encouraged to believe that each person thought differently and that all ideas and opinions were valid, which as a result also increased their confidence. Such skills were very apparent in the post Instances Tests classroom setting, where students were confident enough to do their own work, without stopping to ask for spelling or if their ideas was acceptable or not.

Finally, the Instances Tests have shown that the learner-centered activities employed with student have increased their divergent thinking, and their abilities for expressing their English communicative skills, vocabulary and writing skills. It can be seen that students were able to handle the English language with more autonomy, imagination and confidence after the implementation of the learner-centered activities. This gave them a higher capacity for expressing their creativity.

Likewise, the Teachers Evaluation of Student Creativity was used in order to investigate students' capacity for expressing creativity before and after the implementation of the learner-centered activities.

The pre and post evaluations administered with the teachers, the Teachers' Evaluation of Students' Creativity (TESC). (Runco, 1991) gave an impression of the teachers' perspective on students' creative behaviors before and after the implementation of the lessons.

The Teachers' Evaluation of Students' Creativity has shown that students' had increased their creative behaviors, according to teachers' perceptions

throughout the study. Students were considered by the teachers to be considerably creative (M = 3.05) in the pre evaluations, and very creative (M = 3.52) in the post evaluations. This shows that students have increased their capability of expressing creativity, which can be attributed to the skills that the learner-centered activities fostered in the primary level students. Increasing these characteristics facilitate language learning as they are the same creative characteristics used in learner-centeredness, which is an effective English language learning methodology. As previously mentioned, a variety of these skills are shared between divergent thinking and student-centeredness. Teachers responded that students' none creative behaviors decreased, where in the pre evaluations the students were considered to be considerably non-creative (M = 2.73), and in the post evaluations they were considered by the teachers to be slightly non-creative (M = 2.25). This reduction was expected, because if students' were said to be more creative by the teachers, it is only natural that their non-creative behaviors have dropped. Students became more confident to use the language not only in the lessons administered by the researcher, but also in the lessons administered by the homeroom teacher, where she often mentioned that students' became more outgoing once the study began being implemented.

Lastly, previous researches which were done using the TESC have been proven to be reliable, as teachers know students behaviors for a lot longer than the researcher does, and therefore are able to access students more effectively. (Runco, 1991) In this study, TESC results are used together with the results of three different instruments of data collections, all of which support each other's findings, emphasizing its reliability.

In conclusion, the results have shown that the primary school level students present in the study increased their capability of expressing their linguistic creativity after the implementation of the learner-centered activities.

4.5 Summary

Chapter 4 has presented the findings of the study, through the presentation of tables, graphs and a discussion of the discoveries according to the research objectives. It has shown and proved that the learner-centered activities administered have effectively promoted the divergent thinking of the primary school level students who took part in the study have, and that the students' capacity for expressing creativity has increased after the implementation of the learner-centered activities.