A CASE STUDY OF ENGLISH LANGUAGE STUDENT TEACHERS' CREATIVITY POTENTIAL

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ABSTRACT

Student teachers taking the Teaching of English as Second Language (TESL) program need to be creative in implementing the ESL curriculum in Malaysia. Creative student teachers can motivate school students to learn English Language creatively. In the past, boring language lessons had become a barrier to successful language acquisition. In this regard, the authors examined the creative abilities of thirty-two 1st and 2nd year TESL student teachers taking a Bachelor of Education course in a public university in Sabah, East Malaysia in term of their abilities to generate ideas via providing creative title with a short story. Creative potentials of the subjects were measured by a computer system. Findings revealed that 65.6% of the sample was in the moderate and creative category. Among the reasons identified in this study for producing fewer ideas in such activity were lots of reading (53.1%), the difficulty in predicting the outcome of the story (46.9%) and the lack of experience about the characters in the picture (56.3%). However, those who were found to be very creative were those who scored distinctions in English Language at SPM level ('0' Level). Data also showed that higher English Language competency can improve creativity. The majority of the TESL student teachers surveyed also enjoyed the ideas generation activity and were thrilled to find out that such activity is able to improve their creative thinking abilities in language teaching, in particularly ESL. The researcher recommends that creative components be made an important element in future T & L activities.

KEYWORDS: Creativity, Language learning, Originality, Fluency, Flexibility, Elaboration

INTRODUCTION

Products of innovations and creations come from creativity. Selection of problems and analysis (critical thinking) and then evaluate and solve the related problems are part of the creative thinking process (Treffinger et al., 2000). As Treffinger et al. (2000) pointed out, "we begin at a single point or with a single question, but extend our search in many different directions, generating a wide variety of new possibilities". Divergent thinking or creativity or mentioned in the Guilford's Structure of Intellect Model (Guilford, 1988) has led researchers to a better understanding of intellectual abilities and has also led to the formulation of some tests for creativity, noticeably divergent tests for measuring creativity.

The teaching of English as a second language (ESL) in Malaysia faces a big challenge in terms of quality teaching materials as well as quality assignments related to the topic being taught. School students are in dire need of materials that can promote them to be creative while school teachers too are needed to be trained to teach creatively. This study explores the use of a creativity measurement system to measure the creativity traits of university undergraduates. It exposed them to a creativity technique named "ideas

generation" via the brainstorming technique. Divergent thinking or fluency is used as the basic measurement of creativity (Torrance, 2000). The research questions are:

1) What are the creativity levels of university undergraduates?
2) Can brainstorming technique improve ideas generation in the teaching and learning process?
3) Do high academic achievers have better fluency scores compare to others?

REVIEW OF LITERATURE

Creativity Traits

Sometimes, creative people are referred to as "insane" simply because they love to do unusual things or may love to "goes it alone". These thoughts may be true to some extent. However, creative people are neither strange nor unconventional but have worked hard to innovate and create fresh ways of looking at and solving problems. Lubart (2001) perceived that creative people use novel but appropriate way to come out with high quality original work.

Brainstorming approach to creativity

To be successful in innovation and invention students need to be actively involved in generating ideas. Creativity training program that are geared towards ideas generation such as "brainstorming" play a very crucial role in ensuring supplies of ideas. Brainstorming is a method for stimulating the spontaneous generation of ideas (Vidal et al., 2004). In brainstorming sessions, there should be no criticism during the activity in order to obtain free of judgement, relaxed atmosphere and free flows of ideas.

Measurable Creativity Traits

In this study, the researchers designed a test which is activity-based that uses brainstorming method to promote the generation of ideas. It requires the subjects to provide suitable titles for a given picture. The picture acts as a stimulus to the creative thinking process. Torrance (2000) suggested four measurable creativity traits namely fluency, flexibility, elaboration and originality. Guilford's famous measure of divergent thinking is the fluency trait where all ideas generated are counted. It is generally accepted that divergent thinking is considered as a kind of shorthand for creativity (Torrance, 2000).

According to Torrance (2000), fluency score of a person is accounted for by summing up the total numbers of ideas a person generates while originality is defined as statistically infrequency and unusualness of an idea. In other words, if the idea belongs to 5% of total ideas generated by the whole sample, it is considered as unusual and awarded 1 point and if in the 1% category, it will be considered unique and thus awarded 2 points (Guildford, 1967 in Dow, 2006).

Past Studies on Creativity

In Malaysia, not many researches have been done to investigate the creative abilities of the population. Creativity levels of university undergraduates are surprising average in Malaysia. Tan (2004) use the Torrance's TTCT test to measure creativity traits of university undergraduates of all disciplines at a public university in Sabah, East Malaysia. Results showed that 43.9% (156 out of 278 subjects) of the undergraduates were not creative.

In another study by Ustaa and Akkanat (2015) on scientific creativity levels, a total 300 students were measured. Results showed the 51.4% of respondents were able to gather 72.93 out of 142.00 points that were accounted for. This proved that creativity levels could be improved with appropriate method. In the Malaysia context, the researchers hope that this study will contribute additional knowledge on the creative abilities of Malaysians to the creativity research communities.

METHODOLOGY, SAMPLING AND INSTRUMENT

Method
This study used case study to explore student teachers' creativity potential. According to McCombes (2022), case study uses qualitative method to measure and analyze phenomena or qualitative constructs investigated in the study. With this, the researchers will have an in-depth understanding of the observed variables in the study.

Sample
This is a case study consisting of a sample of 32 undergraduates from a public university in Sabah, East Malaysia. This group of subjects takes TESL courses in the Faculty of Education of the university. The subjects were not randomly selected and belonged to a selected group of students taking a TESL course in the university. As a result, no generalization of the findings is intended in any part of the discussions.

The subjects are from a combination of Year 1 and Year 2 undergraduates with 7 male and 25 female subjects. The more feminine nature of this sample was not intentional. It happened that the enrolment of this class was as such at the point of the study.

Instrument
The respondents were given a creativity test. Besides a creativity test, the researchers also surveyed the subjects' views related to the fluency of giving ideas. The first instrument, the creativity test, the subjects were asked to study the provided picture and gave ten interesting titles in the given worksheet. The picture for the activity is shown in Diagram 1. The answers to the test will be inputted into a computer software to analyze the four sub-constructs of creativity namely originality, fluency, flexibility and elaboration.
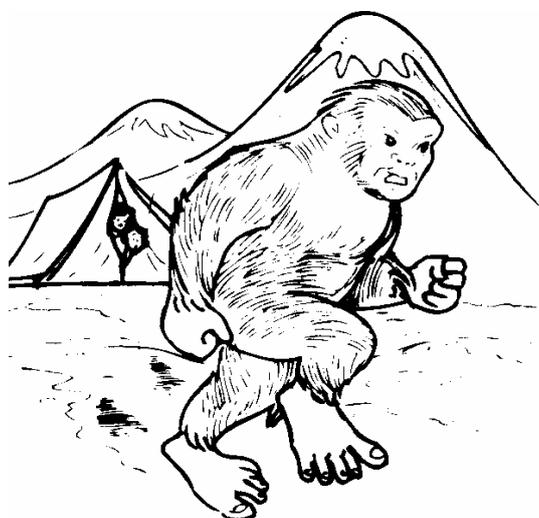
Diagram 1: The picture for the creativity test

The second instrument is an 11-item questionnaire to tap subjects' views on ideas generation related to this test. The subjects select "Yes" or "No" response for each item. The main aim is to seek their views on factors or reasons related to ideas generation which is also a great influence for creativity especially the fluency factor.

FINDINGS AND DISCUSSION

The creativity level of the subjects
The creativity test is the only means to investigate the subjects' creativity level or status. The collected worksheets that contained the "ideas" about the picture are inputted into a

computer system that is specially developed to generate a respondent's creativity level based on typed inputs. After the test, the raw data (inputs) given by them were keyed into the system by the researcher. A sample screen shot of the software is shown in Diagram 2.

Diagram 2: The creativity assessment software

The system will be able to generate the creativity levels of the subjects after all the "ideas" are inputted into it. The total number of ideas generated by the subjects in this study is 71 with a frequency of 153. A general analysis of the subjects' ideas showed that the subjects tend to give ideas that are normal. A normal idea refers to one that is within the mental thoughts of everyone in the sample.

The researcher found that ideas that are quite normal for this picture are "gorilla/monkey/ape, King Kong, mountain, camping and scared boys". As one subject commented in the "other reason" slot of the questionnaire, he said "*The picture only shows a big monkey, so people may likely to talk only about monkey*". This is an example of a person who may not score much in the creativity test because he does not demonstrate that his thinking power will go extra miles. On the other hand, a creative person may harp on issues such as that "*ape has special abilities too*".

The result indicated that among the most *normal titles* are "King Kong" (Frequency = 16), "Ape Man" (Frequency = 14) and "Legend of Bigfoot" (Frequency = 12). As for *outstanding titles*, they are "The Curse", "Darwin Theory: Fact or Myth", "Humans in Fur" and "It Comes Back" (each title with Frequency = 1).

In relation to creativity scoring, ideas that are normal or outstanding are given 1 point for "fluency" for each idea. However, the scoring on "originality" for a particular idea will depend on its number of frequencies. If too many subjects provide the same title (idea), then it is only considered as a normal idea. In this study, the scoring criteria are based on Guildford's Alternative Uses Task (1967) in Dow (2006) as shown in Table 1.

Table 1: Scoring for originality according to Guildford's Alternative Uses Task (1967) in Dow (2006)

Percentage of frequencies	Frequency	Originality Score
1% of total frequency (153) = 1.53 or approximately 2	1 to 2	2
5% of total frequency (153) = 7.65 or approximately 8	3 to 8	1
More than 5%	more than 8	0

Therefore, if based on the calculated scoring criteria in Table 1, for example, the originality score for the title "King Kong" (Frequency = 16) that was mentioned earlier is 0 while for title "The Curse" (Frequency = 1) will be awarded 2 points. Each subject will have scores for fluency, elaboration, flexibility and originality. The total score for the add-up of the 4 components is called Creativity Index or refers to in this study as the *creativity level* of the subjects. The subject with the highest creativity index score is 41. According to (Torrance et al., 1992), the range between the lowest score (zero) and highest score is divided equally into the different categories that are needed. In this study, it is divided equally into 3 categories of creativity level as shown in Table 2.

Table 2: Criteria for setting creativity level

Creativity Index Score	Creativity Level
0 to 13.66	Not creative (Level 1)
13.67 to 27.33	Moderate creative (Level 2)
27.34 to 41	Creative (Level 3)

Based on the criteria mentioned above, the researchers continue to analyze the creativity levels of the subjects in the sample. The study showed that 21 out of 32 subjects (65.6%) belong to the *moderate and creative category* (Level 2 and 3) while 11 out of 32 subjects (34.4%) were *not creative* (Level 1).

Ideas Generation: An Examination

As the test required the subjects to give only 10 titles for the picture, therefore the maximum fluency score for a subject is 10. The researcher divided the analysis of fluency scores into 2 levels. The first level is allocated with score from 0 to 5 while the second level is from score 6 to 10. The result is shown in Table 3.

Table 3: Distribution of fluency scores

Count

		Gender		Total
		Male	Female	
Levels of Fluency	1	5	18	23
	2	2	7	9
Total		7	25	32

The table showed that there are 23 subjects (71.9%) who scored from 0 to 5 while 9 of them (28.1%) scored from 6 to 10 for fluency. Further analysis on the 9 subjects (28.1%) showed that only 2 managed to give ten titles (ideas) while the remaining 7 gave between 6 and 9 titles. This showed that only a low 28.1% (9 subjects) of the total 32 subjects managed to provide more than 5 ideas (out of 10 required). This is quite a serious poser because it seemed to indicate that these undergraduates (the subjects) who will become

school teachers later on are *short of ideas*. Or, are they not competent in English Language that caused them the inability to provide ideas? This question needs to be investigated further.

The researcher did a cross-tabulation between the creativity levels of the subjects and their respective English grades at Sijil Pelajaran Malaysia (SPM) or the 'O' Level equivalent for foreign qualification. It was found that 8 out of 11 subjects whose grade is distinction in English fell into the Level 1 and 2 (not creative and moderate creative category) (Refer Table 4). This proved that *language is not a hindrance to creativity* in this test because even those who are considered very competent in the language (5 of them who scored distinction) did not seem to contribute enough ideas to the test and hence in Level 1. Is not this strange?

Table 4: Cross-tabulation between English grade and creativity levels

Count

| | | English Grade in SPM | | | |
		Distinction	Credit	Pass	Total
Creativity Level of Respondents	1	5	5	1	11
	2	3	14	1	18
	3	3	0	0	3
Total		11	19	2	32

Level 1: Not creative (creativity score: 0 – 13.66)
Level 2: Moderate creative (creativity score: 13.67 – 27.33)
Level 3: Creative (creativity score: 27.34 – 41)

The researcher also investigated another strong possibility or factor that can affect ideas generation. One of the 11 items in the questionnaire asks the subjects "Do you like story telling?" and the result was that 81.3% or 26 out of 32 subjects responded that they like story telling. Of the 9 subjects who scored 5 and above for Fluency (refer Table 3), only one subject did not like story telling. The majority liked story telling. This finding proved that the role of storytelling in promoting creativity could not be ruled out. The role played by storytelling in promoting creativity is fully supported by Turner (1994), a premier researcher in story telling activity.

If language is not a good factor that influences creativity, then there are certainly other factors that are associated with the functioning of ideas generation. The researchers analyzed the feedbacks from the 11-item questionnaire attached together with the test. The feedbacks indicated that "experience in life" (43.8% of the subjects), "lots of reading in the past" (53.1%) and "discussion with my friends" (25%) are factors that contribute to the idea generation process.

Experience in life helps a person to study a problem more thoroughly and may be able to associate many different components into acceptable ideas. This point is fully supported by Cropley (1997) and Gardner (1999) who stated that a lot of experience comes from the implementation of the national curriculum during the schooling days. For example, the scary elements in the gorilla may be done away with by associating it with hilarious elements such as "The Wig or Mask" which is man-made rather than the real, creeping scenario as perceived in the picture. Lack of reading may bring about lack of ideas. For example, lack of knowledge on technology will not let a person think of the gorillas as the future invading species of mankind as illustrated in the book, "The Planet of The Apes". The importance of reading to update knowledge is an important fact in promoting anybody's creativity (Cropley, 1997).

The researcher also identified other reasons for producing fewer ideas in such activity. They were "the difficulty in predicting the outcome of the story" (46.9%) and "the

difficulty to figure out important words for each title" (28.1%). The reasons were especially true for those subjects who were not as good with the "resistance to premature closure" concept as explained by Torrance (1990). Torrance explained that premature closure often happens to a person who is impatience and wants a conclusion quickly. This person is not bothered to think many steps further to formulate other possible solutions or to create unusual association of concepts related to the problem under study. This person also neither likes nor interested in doing predictions. For example, in this study there were instances where subjects gave only two or three normal ideas just to satisfy the test condition and nothing "special" came out of them. Can we brand these subjects as creative when there was little evidence to suggest that they had put in any hard work?

Another reason was "the lack of experience about the characters in the picture" (56.3% of the subjects). Experience with the environment and characters in the picture are an important reason that helps to generate many related ideas. Concrete experience lends support to the generation of ideas, concepts and models that are easily explainable and has solid grounds. In this context, the subjects can be engaged in transforming knowledge and will relate the new information from the picture to their prior experiences and knowledge (Mayes, 1993; Fowler & Mayes, 2000). On the other hand, if a subject doubts or has no experience of any sorts that an ape is able to fly and has never seen one that can do it, he simply may not come out with the idea that apes have the abilities to invade a planet! Furthermore, nobody has seen apes 'talking' before, therefore for those subjects who are practitioners (known as 'pragmatist' according to Honey and Mumford (1992), they are quite reluctant to use wishful imagination to provide unpractical ideas because they need ideas or models that are workable and practical.

LIMITATIONS AND RECOMMENDATIONS

As a result of this study, some limitations have been identified to make future studies better. The limitations are:

1. The creativity test required the subjects to provide a maximum of 10 ideas only. This action limited the 'real' creative abilities of outstanding subjects. For example, the highest scorer (subject with creativity index = 41) may even score higher if he is given the opportunity of "no limitation to 10 ideas"

2. More samples or more subjects are needed for this study to justify the findings better. More subjects with strict sampling procedure can make generalisations of findings possible and better arguments for the related factors.

However, there are also good points that need to be noted in this study. As creativity has become the main focus of this study, the researchers have the following recommendations:

1. Ideas generation or brainstorming for ideas is good for promoting creative thinking abilities of TESL students. This fact was agreed upon by 93.8% or 30 out of 32 subjects who said that this type of exercise is helpful in promoting ideas generation. It should be introduced into the language curriculum. The present curriculum focuses too heavily on critical thinking. Creative thinking is something that is beyond critical thinking (Crowl et al., 1997). Therefore, the researchers suggest that in the future such activity is to be integrated into computer-assisted teaching learning software for the benefits of the ESL communities

2. This case study also lent support for the development of a computer system that can assist in measuring creativity. The result generated by the system proved that creativity assessment can be partially automated. If experiment of this kind is accurate and valid, it is recommended that further effort must be taken to develop it into a portable,

workable and reliable system that can contribute greatly to the field of creativity measurement.

3. As the researchers surveyed into the various reasons and factors of "ideas generation", further studies must be done in the near future to identify and classify factors that truly contribute to creativity in language teaching.

CONCLUSION

This study had proven that "ideas generation" method is a successful and effective brainstorming method to enhance creativity of a person. In fact, many researchers had supported this method (Majaro, 1988; Vidal et al., 2004). In teaching and learning many ideas need to be generated to ensure enough vocabularies for the development of a concept (Ustaa & Akkanat, (2015). Therefore, creativity level of student teachers must be maintained high so that they will not be in loss of ideas. The use of a computer-based creativity measuring tool will help to achieve. Therefore, if proven that the system is effective, it needs to be refined and upgraded to ensure that it can contribute to the field of creativity measurement for language teachers in the near future. This study had also shown that some subjects may be creative but lack the mental or will power to come out with better ideas. Therefore, it is proposed that in the future we develop more training modules that employ brainstorming method to train the fluency of producing ideas and hence improving creativity.

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