The Impact of Using Ishikawa Diagram Strategy to Enhance the Problem Solving Skill in Composition Writing of Iraqi EFL College Students

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Abstract

This study aims at investigating the impact of using Ishikawa diagram strategy to enhance the problem solving skill in composition writing of Iraqi EFL College Students. To achieve the aim of the present study, the following hypothesis has been put: There is no statistically significant differences at (á≤0.05) between the mean scores of the experimental group who is taught problem solving skill in composition writing according to Ishikawa diagram and that of the control group who is taught according to the traditional way in the post-test .Thus, an experiment design was adopted. The sample of the study was Purposive sample consisted of (103) students from 3rd year class\ English department \ college of basic education\ University of Diyala (52) students as an experimental group and

(51) students as a control during the academic year 2017 -2018. Meanwhile, the subjects of both groups are matched according to their age, level of parents' education, and their scores in the pre-test. Pre-test and post-test have been designed .The validity of the tests have been obtained by exposing them to jury members in the fields of TEFL and linguistics. The data was collected, coded out and analyzed by using independent T-Test, two-way ANOVA and paired T-Test to answer the hypothesis of the study. The reliability of the tests has been secured by using Alfa Cronbach formula found to be (0.86) which indicates high reliability. Statistical analysis of data achieved through using the t-test indicates that there are statistically significant differences between the mean scores of the two groups in favour of the experimental group in the post test.

The researcher concludes that using Ishikawa diagram strategy enhances students' problem solving skill in composition writing and provides them with opportunities to actively develop skills, which enables them to locate, gather, analyze, critique and apply information in a wide range of contexts.

اثر استخدام ستراتيجية مخطط ايشيكاوا (عظم السمك) في كتابة الانشاء لتحسين مهارة حل المشكلات للطلبة العراقيين دارسي اللغة الانكليزية. لغة اجنبية

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المستخلص

يهدف البحث التحقق من اثر استخدام ستراتيجية مخطط ايشيكاوا (عضم السمك) في كتابة الانشاء لتحسين مهارة حل المشكلات للطلبة العراقيين دارسي اللغة الانكليزية لغة اجنبية . وللتحقق من الهدف صيغت الفرضية الصفرية (لا يوجد فروق ذو دلالة إحصائية عند مستوى دلالة (٠،٠٥) بين متوسط درجات الطلبة في المجموعة التجريبية الذين درسوا مهارة حل المشكلات في كتابة الانشاء وفق ستراتيجية مخطط ايشيكاوا (عضم السمك) ومتوسط درجات الطلبة في المجموعة الضابطة الذين درسوا وفق الطريقة الاعتيادية في الاختبار البعدي. تبنت الباحثة التصميم التجريبي للضبط الجزئي للمجموعتين التجريبية والضابطة تضبط احدهما الاخرى ذات الاختبار البعدي. أجريت هذه التجربة على عينة قصدية تتألف من

(١٠٣ طالباً من كلا الجنسين). وحددت الدراسة على طلبة المرحلة الثالثة قسم اللغة الانكليزية/ كلية التربية الاساسية / جامعة ديالى للعام الدارسي ٢٠١٧-٢٠١٨. وشملت العينة ٥٢ طالباً في المجموعة التجريبية و٥١ طالباً في المجموعة الضابطة.بعد ذلك تم التاكد من مساواة المجموعتين من خلال العمليات الاحصائية التي تشمل مجموعة من المتغيرات مثل: العمروتحصيل الوالدين ودرجات الطلاب في السنة السابقة ودرجاتهم في الامتحان القبلي . حيث قامت الباحثة بتصميم كلا الاختبارين (القبلي والبعدي) وتم التأكد من صلاحية وصدق الاختبارات بعرضهما على الخبراء في مجالات طرائق تدريس اللغة الانكليزية وعلم اللغة , وتأكدت الباحثة من ثبات الاختبار من خلال الفا كرونباخ والتي كانت (٠,٨٦). وبعد الانتهاء من التجربة تم تحليل البيانات احصائيا" باستخدام الاختبار التائي وقد توصلت الباحثة إلى وجود فروق ذات دلالة إحصائية بين المجموعة التجريبية والمجموعة الضابطة في مهارة حل المشكلات في نتائج الاختبار البعدي ولصالح المجموعة التجريبية .

استنتجت الباحثة ان استخدام ستراتيجية مخطط ايشيكاوا (عضم السمك) اثبتت بانها تكون اكثر فاعلية وانتاجا في تحسين مهارة حل المشكلات في كتابة الانشاء و يعزز أداء الطلبة ومهارتهم , وتمنحهم الفرصة لتنشيط وتطوير مهاراتهم التي تمكنهم من تحديد , تجميع , تحليل ونقد المعلومات على المدى الطويل وتنمية الفهم لديهم .

Introduction

Problem solving is a part of thinking. There are several steps of problem solving. The first thing which is necessary for solving personal and organizational problems is the knowledge of problem solving process. Students who have learned problem solving process can be successful in every stage of their lives by using these skills in finding solutions to the encountered difficulties and problems. In this study, the effect of Ishikawa diagram on achievement of students' problem solving skills is investigated. The concept of problem solving was systemized firstly by American educator John Dewey and Russian educator Vygotsky. Individuals' skill of problem solving is related to their concentration on the problem and self-evaluation (Heppner, et al, 1985:34).

The Ishikawa diagram was invented by Kaoru Ishikawa, who pioneered quality management techniques in Japan in the 1960 s. The diagram is considered one of the seven basic tools of quality control (Ishikawa ,1990:7). It is also known as a fishbone diagram because of its shape. The 'fish head'

represents the main problem. The potential causes of the problem, usually derived from problem solving skills or brainstorming sessions, are indicated in the 'fish bones' of the diagram.

This fishbone diagram is known as a cause and effect diagram. Ishikawa's diagram has been called "fish bone", because its form has a similarity to a fish, which has a head (as an effect) and a body in the form of bones, illustrated as causes of known problems (Tiann, 2012:17). Scarvada (2004:8) says that the fishbone diagram can be enlarged into a cause and-effect diagram. This extension of fishbone diagram can be done through a questioning technique "How come it's up to five whys?" (Pande & Holpp, 2001:25). Thus, by identifying the causes of the effect, it is hoped that the result of the production process can be improved by changing the controlled factor of a process. This diagram is also useful to identification of causes of a potential problem. A cause-and-effect diagram focuses on emphasizing a problem or a symptom of a problem. This diagram can also show the causes of a problem by connecting them into one group. Fishbone diagrams are used to identify and systematically list the different root causes that can be attributed to a problem. Thus, these diagrams help to determine which of several causes has the greatest effect. The main application of these diagrams is the dispersion analysis. In dispersion analysis, each major cause is thoroughly analyzed by investigating the sub causes and their impact on quality characteristics. The Fishbone diagram helps to analyze the reasons for any variability or dispersion (Prasad, 2012:4). Cause-and-effect fishbone diagrams focus on the problem emphasized or the symptom which becomes root causes. By identifying a real problem and finding a root cause, an alternative action plan can be formulated or identified which in turn becomes a way out in improving the quality of education. Further, the alternative is analyzed on the basis of particular criteria, qualitatively or quantitatively. Lastly, the best alternative is chosen on the basis of particular criteria and priority, and finally a decision can be taken. Why Root Cause Analysis (RCA) becomes important? 1)

eliminates unfounded opinion, prejudice, and organizational myth, 2) reduces false starts, patching of symptoms, and waste of scarce resources, 3) converts data to information, knowledge, understanding, and wisdom, 4) improves data-based decision making (Preuss, 2003; City Process Management, 2008).

Fishbone diagrams are used in the "analyze" phase of Six Sigma's DMAIC (define, measure, analyze, improve, control) approach to problem solving.

1.1.The problem and its significance

Most of the people think that they are born with problem solving skill. However, there are not many people who receive training and perceive the importance of problem solving (Kneeland, 2001:22). When we face with a particular problem, analyzing and decision-making skills gain importance. Notwithstanding, individuals develop, unconsciously, their own methods of problem solving and decision making with their own personality, being brought up styles and things that they learn in school (Arnold,1992:51). In fact, problem solving is a skill that can be learned like other skills. Therefore, the first thing that is necessary in solving individual and organizational problems is knowing problem solving process. Problem solving process can be facilitated by using open ended materials and group projects to provide integrated learning even when the pressure of time is involved. Those who will do this are teachers (URL, 2006:12). Fogler and Leblanc (1995:67) state that a problem does not have a single solution and different methods should be applied in different situations. Students that have learned problem solving process can be successful in all fields of life by using these skills and finding solutions to individual problems and difficulties.

After making interviews with some English language instructors\ college of basic education and college of education, and through the researcher`s observation, she became aware of the problems that students encounter with problem solving skills in composition writing. It is obvious that instructors often face various difficulties and challenges while teaching English as a foreign language. It has been found that the students' problem

solving skill in composition writing is still poor. They have very poor performance in arranging thoughts logical order and give suitable solutions : The students find that solving problem by using English language is difficult and at the same time stressing. They does not feel confident in their thinking and does not encourage themselves to develop their ability in problem solving skill. Hence, they does not frequently practice this skill unless the teacher asked them. The problems faced above are not solely caused by the inability of the students to think, but also by the inappropriate strategy implemented by the teacher in the teaching and learning process. For this reason it has been selected using Ishikawa diagram strategy and intends to develop EFL learners` problem solving skill in composition writing.

According to the present study, the researcher tries to shed light on this problem hoping to find solutions and remedy to the difficulties faced by students.

Aim

The present study aims at investigating the impact of using Ishikawa diagram strategy to enhance the problem solving skill in composition writing of Iraqi EFL College Students \ University of Diyala .

Hypothesis

It is hypothesized that there is no statistically significant differences at (á≤0.05) between the mean scores of problem solving skill in composition writing of the experimental group who is taught according to Ishikawa diagram strategy and that of the control group who is taught according to the traditional way in the post test .

Value of the Study

The present study is hoped to be value because it:

1. May improve the performance of the 3rd year EFL College students in their problem solving skill in writing composition.

2. May contribute to helping teachers of English by adopting a new strategy as Ishikawa diagram in teaching writing and other language skills in order to help in solving some problems in teaching and learning English in Iraq.

Limits

The study is limited to the:

1. Third year EFL college students at the department of English \ College of Basic Education \ University of Diyala at the academic year 2017-2018.
2. Practical phase of teaching problem solving through composition writing.

Definitions of Basic Terms

Problem solving skill : Arnold (1992: 25) defines Problem solving skill as the process of identifying a problem, developing possible solution paths, and taking the appropriate course of action. The ability to solve problems is a basic life skill and is essential to our day-to-day lives, at home, at school, and at work. We solve problems every day without really thinking about how we solve them.

Ishikawa diagram strategy: Cause and Effect diagram or Fishbone diagram. Is a graphic technique and is a good tool to find and significantly analyze affecting factors in identifying the characteristics of work output quality (San, Tjitro, & Santoso, 2003:29)

Theoretical background

Problem Solving Skill

The term problem-solving is used in many disciplines, sometimes with different perspectives, and often with different terminologies. For instance, it is a mental process in psychology and a computerized process in computer science. Problems can also be classified into two different types (ill-defined and well-defined) from which appropriate solutions are to be made. Ill-defined problems are those that do not have clear goals, solution paths, or expected solution. Well-defined problems have specific

goals, clearly defined solution paths, and clear expected solutions. These problems also allow for more initial planning than ill-defined problems. Being able to solve problems sometimes involves dealing with pragmatics (logic) and semantics (interpretation of the problem). The ability to understand what the goal of the problem is and what rules could be applied represent the key to solving the problem. Sometimes the problem requires some abstract thinking and coming up with a creative solution.

http://en.wikipedia.org/wiki/Problem_solving.

Stages of Problem Solving

Effective problem solving usually involves working through a number of steps or stages, such as those outlined below.

- Problem Identification:

This stage involves: detecting and recognising that there is a problem; identifying the nature of the problem; defining the problem.

- Structuring the Problem:

This stage involves: a period of observation, careful inspection, fact-finding and developing a clear picture of the problem.

- Looking for Possible Solutions:

During this stage you will generate a range of possible courses of action, but with little attempt to evaluate them at this stage.

- Making a Decision:

This stage involves careful analysis of the different possible courses of action and then selecting the best solution for implementation.

- Implementation:

This stage involves accepting and carrying out the chosen course of action.

- Monitoring/Seeking Feedback:

The last stage is about reviewing the outcomes of problem solving over a period of time, including seeking feedback as to the success of the outcomes of the chosen solution.

Solving problems is a complex process and each of us is better at the skills required at some stages than others.

Yunus, A.S., R. Hamzah and R.A. Tarmizi(2006 :90) state a list of some of the reasons why people fail to find effective solutions include

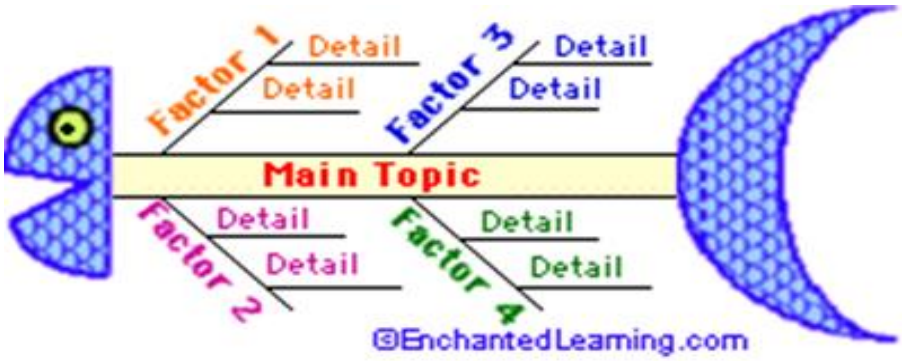
- not being methodical
- lack of commitment to solving the problem
- misinterpreting the problem
- lack of knowledge of the techniques and processes involved in problem solving
- inability to use the techniques effectively
- using a method inappropriate to the particular problem
- insufficient or inaccurate information
- inability to combine analytical and creative thinking
- failure to ensure effective implementation.

Fishbone Diagram in Learning

A fishbone diagram aims to break down and organise the causes of an issue to reveal what elements have the greatest impact. Grouping the "causes" means you can think about the different elements of the problem as separate from the overall process. One or two of these "causes" will have a greater effect than the others and will guide you to the root of the problem. This structure also allows you to tackle smaller chunks which have a large impact on the problem. Looking at elements of the problem and not the whole process will likely make finding your solution less daunting and problem solving more manageable (Dahari ,2013:23).

After you have determined your root cause, prioritise or screen the causes to determine which are having the largest effect. An easy cause screening method involves looking at each one and asking two questions. The advantage of Fishbone diagram is that it can break down each identified problem and everybody involved can contribute suggestions which may be the cause of the problem. The fishbone diagram is both a tool and a technique to identify a solution to a problem creatively for

the improvement of educational quality. The root cause analysis has an important role in educational innovation in deciding further corrective and innovative policies. A symptom, phenomenon, gap, or disharmony which exists in the process of education, or any actual problem arising both theoretically and practically, in macro or micro circumstances, can be analyzed by this diagram (ibid).



Methodology and Procedures

The Experimental Design

It is necessary to choose an appropriate design to determine whether or not the obtained results will be valid, objective and accurate. The experimental design applied in the present study to achieve its aim is the *pre-test-post-test non-equivalent groups design*. Gravetter and Forzano (2012: 282) argue that this type of design is a strong one.The researcher adopted experimental design which is considered the only way to approach Causes & Effect. It is a method of controlling all variables, except the interest which is manipulated by the investigator to determine if it affects another variable" ,(Jonasson, 1996:75).

The researcher applied the Ishikawa Diagram strategy in teaching composition writing to find its effectiveness to enhance the Problem solving skill on an experimental group, while the control group receives the traditional treatment. First, both groups are pre-tested, and then the experimental group is taught problem solving in composition writing according to Ishikawa Diagram strategy. The post-test was attempted for the two groups and the results were calculated.

Table (1) the Experimental Design

Group	Test	Treatment	Test
Experiment group	pre-test	Ishikawa Diagram	Post-test
Control group	pre-test	Traditional technique	Post-test

Population and Sample

The population of this study is limited to the 3rd year student at English Department (morning studies) / College of Basic Education / University of Diyala , during the academic year 2017-2018.Since the population of the study is limited, they are all considered as a sample of the current study. The sample consists of (103) male and female students. In order to increase the sensitivity of the experiment, the researcher has equated the sample on the basis of four variables: The age of the students, the level of fathers' education, the level of mothers' education and the students' pre- test performance in problem solving.

Table(2)the Number of Sample before and after Excluding the Repeaters

Group	Section	No.	Repeaters	Final no.
EG	A	55	3	52
CG	B	53	2	51

The Experiment Application

The Experiment Application has divided into the following three main phases:

1-Preparation stage: The experimental group of the study was given orientation steps on Ishikawa Diagram strategies (Fish Bone). To clarify, a week before the study started, the researcher implemented a few techniques to turn the traditional classroom into a fish bone context. First of all, the researcher prepared the climate for Ishikawa Diagram strategy by dividing the classes into six heterogeneous groups based on the English average grades of the previous year. The principle of the heterogeneous grouping in this study aimed at ensuring that each group was consisting of students with different academic achievements. Besides, the seating arrangement was also changed, form rows where students sit facing each other's back, to students sitting face to face with their group members.

Students were informed that they had to rotate roles every week. That is, the member who was a leader the first week was a reporter next week etc… The rotation was to ensure that each student had an equal chance to experience different kinds of responsibilities.

2. Implementation stage: The team using the fishbone diagram tool should carry out the steps listed below.

● Agree on the problem statement (also referred to as the effect). This is written at the mouth of the "fish." Be as clear and specific as you can about the problem. Beware of defining the problem in terms of a solution .

● Agree on the major categories of causes of the problem (written as branches from the main arrow).

● Brainstorm all the possible causes of the problem. Ask "Why does this happen?" As each idea is given, the facilitator writes the causal factor as a branch from the appropriate category (places it on the fishbone diagram). Causes can be written in several places if they relate to several categories.

● Again asks "Why does this happen?" about each cause. Write sub-causes branching off the cause branches.

● Continues to ask "Why?" and generate deeper levels of causes and continue organizing them under related causes or categories. This will help you to identify and then address root causes to prevent future problems.

Tips:

● Use Ishikawa diagram tool to keep the team focused on the causes of the problem, rather than the symptoms.

● Consider drawing your fish on a flip chart or large board.

● Make sure to leave enough space between the major categories on the diagram so that you can add minor detailed causes later.

● When you are brainstorming causes, consider having team members write each cause on sticky notes, going around the group asking each person for one cause. Continue going through the rounds, getting more causes, until all ideas are exhausted.

● Encourage each person to participate in the brainstorming activity and to voice their own opinions.

● Note that the "five-whys" technique is often used in conjunction with the fishbone diagram – keep asking why until you get to the root cause.

● to help identify the root causes from all the ideas generated, consider a multi-voting technique such as having each team member identify the top three root causes. Ask each team member to place three tally marks or colored sticky dots on the fishbone next to what they believe are the root causes that could potentially be addressed.

Using this tool has several benefits to process improvement teams:

- Straightforward and easy to learn visual tool.
- Organizes discussion to stay focused on the current issues.
- Promotes "System Thinking" through visual linkages.
- Prioritizes further analysis and corrective actions.

3. Post stage: After 10 weeks of the treatment , the researcher in this stage have two phases the first one , is the evaluation .In the evaluation phase of the lesson, students check the level of their performance so that they can gain an understanding of what they have learned. Evaluation activities can be individual, cooperative, or teacher-directed. Thus, the aim of this stage is to make students self-confident and completely understand and use the selected vocabulary in natural English. The second phase is the expansion. In the expansion phase of the lesson, students are

given a variety of opportunities to think about the new way to solve the problem repertoire they have learned, integrate them into their existing knowledge frameworks, make real world application, and continue to develop academic language. This phase also provides the opportunity to exercise problem solving skill through using certain technique.

The Test and its Scoring Scheme

One of an excellent device for providing both a purpose and content for problem solving is the use of Ishikawa diagram. It is not only provides the students with the basic material for their problem solving skill but also stimulates their imaginative powers. The analytical scoring scheme of test adopted from Yunus,et.al.(2006). The test is given 60 marks distributed as follows:

Table (3) the analytical scoring scheme for problem solving

Problem Identification 10 marks	**Structuring the Problem 10 marks**	**Looking for Possible Solutions 10 marks**	**Making a Decision 10 marks**	**Implementation 10 marks**	**Monitoring/ Seeking Feedback 10 marks**
identifying the nature of the problem	**fact-finding and developing a clear picture of the problem**	**generate a range of possible courses of action**	**careful analysis of the different possible courses of action and then selecting the best solution for implement ation**	**accepting and carrying out the chosen course of action**	**reviewing the outcomes of problem solving over a period of time, including seeking feedback as to the success of the outcomes of the chosen solution.**

The Students' Achievement on the Pretest

An independent t-test formula has been used to compare the mean scores of the experimental group and control group on the pretest. As shown in Table(4), the mean score of the control

group was 41.63, whereas the mean score of the experimental group was 58.32. The calculated t-value was found to be 5.59 at 98 degree of freedom and 0.05 level of significance, which indicates that there are no statistically significant differences between the achievements of the two groups in the pretest. This confirms that the participants assigned to experimental group and control group is not initially different but homogeneous.

Table (4) The Mean, Standard Deviation and T-value of the Subject`s Achievement on the Pretest.

Group	No.	M	SD	Df	T-value		Level of significance
					Calculated	Tabulated	
EG	52	58.32	13.04	98	5.59	1.98	0.05
CG	51	41.63	9.60				

Post-testing

A week after the end of the instruction period of the strategy of Ishikawa diagram, all the students in different groups again a problem solving skill test. The papers were collected and each student's score was measured based on the average score for the two raters.

Validity and Reliability of the Instrument

The primary purpose of language test is to provide a measure that one can interpret as an indicator language of an individual's language ability. Hence, the measurement quality, validity is too essential to the usefulness of any language test (Bachman and Palamer, 2000:23-24). For validating the instrument (checking if it measures what is it meant to be measured, the researcher submitted the test to (5) experts who are known for their long experience in the field of linguistics and TEFL methodology. After approving its suitability for the purpose of the study, the researcher took the suggested modification into consideration and it was typed again and distributed it to the students. The reliability of a test is a number

of how consistently it produces similar results on different occasions under similar circumstances (Oller, 1979:4). To ensure the reliability of the test, the researcher has also ensured the inter-rater reliability. She asked another teacher to correct the test papers. So each of the 52 students has two scores, the correlation between the scores of the two raters (the researcher and the instructor) was calculated by Alfa Cronbach formula. The reliability coefficient was found to be (0.86) which indicates high reliability.

The Result

The results obtained from the application of the posttest on the two groups show that the mean scores of experimental is 29.65 and that of the control group is 23.78 . The computed t – value 8.164 is higher than the table t-value 4.813 at 0.05 level of significance and under 98 degrees of freedom.

Table (5) the Statistics of the Performance of the EG and CG on Post-test

Groups	No. of subjects	M	S.D	df	t- value	
					Calculated	Tabulated
E G	52	29.65	8.164	98	5.261	1.978
C G	51	23.78	4.813			

This result shows that there is a statistically significant difference between the two groups in the problem solving skill of composition writing posttest scores in favor of the experimental group .This means that , the experimental group is better than the control group ; so the hypothesis which indicates that there is no statistically significant differences at (á≤0.05) between the mean scores of problem solving skill in composition writing posttest of the experimental group who is taught problem solving skill in composition writing according to Ishikawa diagram strategy (Fishbone) and that of the control group who is taught problem solving skill in composition writing according to the traditional way refused.

Conclusions

The administration of problem solving skill in composition writing post- test to the experimental and control groups proved that the Ishikawa diagram strategy had a positive effect on developing Iraqi EFL college students' writing skills in terms of content and organization, mechanics of writing, language use as well as in skills emerged from creative abilities (fluency, flexibility, novelty and elaboration) Based on findings of the study. The effectiveness of using Ishikawa diagram strategy in developing students' problem solving skill, and could help learners identify elements of problem, a fact that highly develops their writing skills and help them come up with well organized composition based on clear elements. Writing in general and creative writing, including problem solving, in particular, could be developed in an encouraging environment through which students get involved in the writing process.

The right strategies use to teach language can make the process of teaching and learning more alive and conducive. It can be known from their motivation to study. If the students enjoy the class, they will be motivated to learn; hence it can improve their learning achievement.

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Appendix A

The pretest

Detective Ahmed stopped by Ms. Nadia house to inform her that the creep who had been stalking her years ago had just escaped from prison. She seemed to take the news fairly well, and was very polite, though she didn't invite him in.

"You know how demented he is, I'm worried that he'll come after you. Who knows what he might try!" Detective Ahmed said.

"Oh, I'm sure I have nothing to worry about," she replied. But she did sound pretty nervous.

"Would you like me to assign a security detail to you?" he asked.

"Oh, no. I'm a teacher for heaven's sake! Having bodyguards following me around would just scare the students at my school."

"Well, please give me a call or send me an email if you see anything suspicious at all. In fact, send me an email later no matter what, just to let me know that you're alright."

"I will definitely do that!" Ms. Nadia replied.

Detective Ahmed got in his car and started back to the station, but after only a few minutes his phone buzzed to inform him that he had an email from Ms. Nadia. It read:

This morning I tried a fun new seating style for the kids during the morning assembly. I helped arrange them into rows of twenty one. The kids didn't care, but I really loved it. I liked the second column the best.

"Why on earth would I care!?" he thought to himself. But then he remembered her passion for codes and realized she may be trying to tell him something. He took a closer look at her email, and couldn't believe what he found!

Q1 \ Read the story carefully and : A- try to identify the problem of the story and, B-Can you tell what the woman was trying to say to the detective? , C- What could have changed the

whole story?, D- How could the story have ended differently? E- If you are putting in the same situation of the woman what will you do?

Q2\ Try to answer the following:

1-A man is wearing black. Black shoes, socks, trousers, coat, gloves and ski mask. He is walking down a back street with all the street lamps off. A black car is coming towards him with its lights off but somehow manages to stop in time. How did the driver see the man?

Q3\ Take the given words, and by moving a single letter from one word to the other, make a pair of synonyms, or near synonyms. For example, given: Boast - Hip, move the 's' from 'Boast' to 'Hip' creating two synonyms: Boat - Ship.

1. Pain – Nil
2. War – Zoned
3. Routing – Tip
4. Shot – Teaming
5. Right – Blight

Q4\ Find the animals hiding in the following sentences. Example Close the doo**r at** once! (rat).

1. That will be a real help.
2. She came late every day.
3. He came to America today.
4. Eric owes me ten cents.
5. She clothes naked babies.
6. Do good workers succeed?
7. If I shout, he'll hear me.
8. If Roger comes, we'll begin.
9. We will go at two o'clock.
10. I'll sing; you hum on key.

Appendix B

Post test

Five guests, Mr. Rose, Ms. Tulip, Sir Daisy, Lord Pansy and Miss Lily, were all invited to an exclusive party at Brainteaser

Mansion. However, during the long, dark night, the owner of the spectacular mansion, Mr. Death, was found dead in his office. The trouble is, every member of the party went into his office, each at a different time, with a different weapon, motive and clue that incriminated them. From their statements below, can you work out who killed him?

Mr. Rose's statement: "I didn't do it. I never left a footprint because a woman did. I entered the room before the person who took in the poison. I must say though, she was in there for a quarter of an hour before someone else went in!"

Ms. Tulip's statement: "Okay, I admit it! I took in the revolver, even though my motive wasn't revenge. A man entered the room after me and his motive was either rage or blackmail."

Sir Daisy's statement: "All I know is, I did leave a fingerprint, but that doesn't explain why Miss Lily lost a hair, does it? Oh yes! The person who entered seventy minutes before me took in the lead pole."

Lord Pansy's statement: "I entered after a woman, who did not take in rope because the last person to visit him did. I was in there for more than thirty-five minutes confronting Mr. Death with my motive, which, may I say, wasn't greed or blackmail."

Miss Lily's statement: "Yes, you caught me! My motive was jealousy, but it wasn't as bad as that man's blackmail motive, who entered at five minutes past nine. I entered before another man who left the incriminating clue of the blood drop."

Q1 \ Read the story carefully and : A- try to identify the problem of the story and, B- The person who entered the room at half past ten is the real killer. Who did it? , C- What could have changed the whole story?, D- How could the story have ended differently? E- If you are putting in the same situation what will you do?

Q2\ Find the name of a color hidden in each sentence: (The first one has been done as a sample.). 1. Some parts of the face are the eye, eyebrow, nose, and mouth.
2. I'm not really dumb; lack of sleep made me forget the answers.
3. If I tell you what she said, will you agree never to tell anyone?
4. In the box we found a pencil, a pin, keys, and a few coins.
5. Are three zeros enough to write the number one thousand?
6. The wheelbarrow hit eleven rocks as it rolled down the hill.
7. When the nurse gives you the injection, just yell "Ow" if it hurts.
8. Eisa and Otto ran gently down the path to the river.
9. Before arriving at Kuala Lumpur, please fill out these forms.
10. I play nearly all the stringed instruments: violin, cello, bass viol, etc

Q3\ The answer to each of the definitions below is a five-letter word. Each of these words ends in the same four letters, but has a different first letter. What are they?
1. Power.
2. Vision.
3. Opposite of loose.
4. Not dark.
5. Opposite of wrong.
6. Not day.
7. Contend, struggle.
8. The number of this clue.

Q4\ A man went to a party and drank some of the punch. He then left early. Everyone else at the party who drank the punch subsequently died of poisoning. Why did the man not die?