

COMPARING PROBLEM SOLVING BETWEEN HIGH AND LOW ACHIEVERS TEST TAKERS TO OVERCOME TEST ANXIETY IN TOEFL

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Abstract. Test anxieties cannot be denied by the test takers in TOEFL test. Sometimes, anxieties bring to negative and positive effects to the test takers. Each test taker has the way to solve their problems to overcome their anxieties. However, every problem solving may bring the test takers to successful and unsuccessful. This present study wanted to compare the problem solving between high achievers and low achievers test takers in TOEFL test performance to overcome their anxiety. The quantitative survey research design was used in this study to investigate the difference between both test takers. The researcher used the online questionnaire to collect data from the participants. Moreover, 30 participants were selected purposively by the researcher. The results show that the high achiever test takers are better in solving their problem toward test anxiety. The difference occurs in planning, cognitive, self-efficacy and self-checking problem solving.

Keywords: Problem solving, test anxiety, TOEFL test.

INTRODUCTION

TOEFL test is widely followed by the people from a variety groups nowadays to measure their English proficiency. They are from students, teachers, job seekers, employees, etc. Those test takers take TOEFL test in some purposes either; they want to go to other countries, they need it for academic purpose, they need it as an equipment to get a job or they need it to level up their position in particular job. All of the groups have the same goal; it is to get the best score in their TOEFL test. Looking at their goals to get a good score in TOEFL test, test takers must have their own attitudes and efforts because they are anxiety toward the result. Their efforts to improve their ability in English proficiency will also influence their performances in this test. Another aspect that influences this test is individual problem solving in this test to get the best scores as the test takers wish. The test may affect test takers from different aspects such as age, learning strategy and style, attitude and motivation, aptitude, intelligence and anxiety can contribute to test bias (Brown, 2004 ;Weir, 2005).

It is common for the test takers to be influenced by the aspects above because each test must bring some effects to the test takers, such as doubtful and anxieties. Anxiety means the feeling of fear to fail in the test. However, some anxieties may take negative impact to the test takers. There is a previous study (Chen and Chang, 2004) that reported anxiety has negative effects on students’ language learning sometimes. Test anxieties during the test decrease test takers’ attention and sometimes increase the number of errors in the test (Ohata, 2005; Cassady & Johnson, 2002). Test anxiety is the physiological state of mind of a test taker about a test as expressed of worry, fear, uncertainty, concern and helplessness expressed before, during or even after a test or examination (Olatoye & Afuwape, 2003). Those impacts have to be solved by the test takers in order to achieve their goals in the test.

However, not all problem solving bring the test takers into their successful. Some test takers may get the high score with their problem solving, while the other cannot get the good score with their ways in solving the problems. Problem solving requires skills ranging from creativity, over-analytical skills to skills that allow learners to put theories and ideas into practice. As a result, learners have more opportunities to promote their cognitive and meta-cognitive skills, such as critical thinking, decision making, self-awareness and self-reflection (Kartoyaki & Drigas, 2016). Also, problem solving is cognitive process directed at achieving a goal when no solution is obvious to the problem solver (Mayer & Wittrock, 1996).

Problem solving is defined as a cognitive-affective-behavioral process that allows a person to find the best solution to a problem or to make a critical decision for a real-life situation (D'Zurilla & Nezu, 1982). Problem solving has cognitive, emotional and behavioral aspects and together they reflect a person's appraisals, feelings, and general beliefs about his/her own problem solving ability when facing a stressful situation, it includes a set of the cognitive and behavioral activities during problem solving process in order to find effective solutions (Frauenknecht & Black, 2003). Problem-solving can empower the individuals to adopt effective and settled strategies to confront the daily problems (Mehdinezhad & Bamari, 2015). It means problem solving help the test takers to decide the strategies in the test so that it will give them the chance to overcome their own problems and reduce their anxiety before, during even after the test. It is important for every test taker to improve their ability in solving the problem because it can help them to reduce their stressfulness and any fear that can make them doubt with their own ability.

The previous study investigated about the relationship between test anxieties and problem solving. It was found that statistically meaningful relationship was noticed between test anxiety and problem solving. Meanwhile the results showed that there is a negative and meaningful relationship at low level between epistemological beliefs and problem solving (Mehdinezhad & Bamari, 2015). While the next old research showed that the need for a multidimensional model of test anxiety includes coping processes and self-evaluations of problem-solving ability (Blankstain, Kirk, R, et al. 1992)

There are so many studies that investigate about the relationship of problem solving toward gender, intelligence and others to overcome test anxiety. However, the present study investigated the comparison of problem solving between the high and low achiever test takers to solve their anxiety in TOEFL test. The researchers wanted to see the problem solving of the test takers that have high score on the TOEFL test and those who have low score.

METHODOLOGY

This study used the quantitative survey research design because the researcher wanted to identify the attitudes of test takers in solving their problem to overcome their anxieties. A questionnaire adapted from the problem-solving assessment (O'Neil & Schacter, 1997) was used in this research, because researcher thought that it could identify the test takers problem solving in TOEFL test. They divided it into some components of problem solving, they are domain-specific knowledge (content understanding), metacognition (planning and self-monitoring), domain-specific problem-solving strategies and motivation (self-efficacy, effort). The data was analyzed into percentage range. Moreover, the researcher also interviewed some of the participants related to their answer in questionnaire to enhance the data.

The researcher conducted the questionnaire to 30 respondents who have taken TOEFL test. It was used the purposive sampling to obtain the participants in this study. The researcher utilized the questionnaire by translating it into Bahasa Indonesia, first. Therefore, this instrument would not be hard to be understood by the respondents. The instrument was shared online to the respondents. *This research was guided by a research question; is there significance difference of problem solving between high and low achiever test takers in TOEFL test?* The data was analyzed into percentage range. The researcher ranked the test takers score first, and divided them into 15 high achiever test takers and 15 low achiever test takers. Finally, the responds of test takers toward the questionnaire were analyzed based on those groups.

Finding and Discussion

The findings of this research deal with percentage of participants who did the served problem solving from the researcher during their TOEFL test. The researcher divided the

problem solving into some components. They are planning, cognitive strategy, self-checking, effort and self-efficacy.

Planning

For the first component of problem solving from (O’Neil & Schacter, 1997), the results show that the high achievers test takers did better than low achievers. They got the greater percentage in almost statements, except about thinking purpose of the test before the test and what to do to get good score. High and low achievers got the same percentage; it is 93.3% from participants of each test takers group think about the purpose and what to do to get a good score in the test. It shows that the planning problem solving that is done by the test takers will bring them to high score.

Statement	High Achievers	Low Achievers
Deciding the strategy to do the test before the test	80 %	66.6 %
Trying to understand the questions before answer the test (especially in listening)	93.3 %	86.6 %
Thinking about the purpose of the test and what to do to get a good score	93.3 %	93.3 %
Thinking about the possible questions which include in the test	73.3 %	53.3 %
Making sure to understand each section in the test before answering the questions	93.3%	80 %

Table 1. The result of problem solving for planning component.

Another statement of problem solving in planning component is about trying to understand the question before answering the questions, especially in listening section. Both test takers did not have significance difference in this problem solving; 93.3 % is for high achievers and 86.6 % is for low achievers. They tried to understand the questions before the listening audio played. It is good for both test takers, because they really know what to do in listening sections. It can be caused by their anxieties of listening section in TOEFL test so that they think they need to plan something to solve any problems they face in the test. As a theory says the test takers’ anxieties are tense and apprehensive, especially when participating in listening and speaking activities, greater foreign language anxiety tend to experience greater listening anxiety (Hussein, 2005). They said that they tried to read the listening questions to determine the questions so that it would make them easier to answer the questions.

Moreover, 73.3 % of high achievers test takers thinking about the possible questions that may be appears in the TOEFL test. It must be their way to prepare any strategies that can be used to solve the questions in the test. It is related to a theory that discuss about problem solver; the problem solver attempts to solve the problem, while fully thinking about the effort along the process of the test (Ali & Zuhri, 2015). On the other hand, only 53.3 % of low achievers test takers who predicted the possible questions that might appear in the test.

Cognitive

The second component of problem solving in this research is cognitive problem solving. The experienced test takers are having the greater percentage in this component 86.6 % of high achievers test takers used more than one strategy in TOEFL test, while for the low achievers test takers is only 60% of them who did it. The test takers did not stick with one strategy to answer the questions. The researcher thinks that it is caused by having more experiences in strategies of TOEFL test. They must know which strategy that works better in doing the test rather than the other strategies. In other problem solving ways, both test takers got the same percentage. It is in spending more time in difficult question. Both test takers

spent more time in difficult questions, for instance in reading section. They said that since reading sections have some long texts that should be read, they give more time in this section. Then, they also needed to think aloud about some unrecognized words in which they had to understand it based on the context.

Statements	High Achievers	Low Achievers
Using more than one strategies to answer the questions	86.6%	60 %
Spending more time in difficult questions	73.3 %	73.3 %

Table 2. The result of problem solving for cognitive component.

Self-checking

The next component of problem solving is self-checking. This component is also led by high achievers test takers. 73 % of high achievers test takers checked their answer during the test, whether they got the wrong answer in their test. It is one of their ways to minimize their mistakes in TOEFL test. Just in case they did not concentrate well in the test they might made some mistakes in some questions. 100 % of the high achievers test takers corrected their answer if they felt that it was the wrong answer. While, the low achievers test takers did not really do self-checking in their test, few test takers said that they even did not know whether they could correct they answer because they did not know if it was wrong or right. Other low achievers test takers told that they had lack of times to check their answers.

Statements	High Achievers	Low Achievers
Checking the answer during the test	73.3%	53.3 %
Judging the correctness of my answer.	80 %	40 %
Correcting my errors.	100%	73.3 %
Asking myself how well I do the test	86.6 %	73.3 %

Table 3. The result of problem solving for self-checking component.

Effort

The table below shows the result of effort component in problem solving between high achievers test takers and low achievers test takers.

Statements	High Achievers	Low Achievers
Trying the best in this test although I do not like it	86.6%	93.3 %
Concentrating as hard as I can during the test	93.3%	86.6 %
Practicing makes perfect	100%	60 %

Table 4. The result of problem solving for effort component.

In this component, test takers attempt to achieve the good score in TOEFL test. Both test takers tried their best to do the TOEFL test for the best result. However, based on the result, the high achievers test takers had greater percentage toward the concentration during the test. Moreover, about the practice before the test was done better by the high achievers test takers. 100 % of them asserted that they practiced much before taking the TOEFL test. While only 60 % of the low achievers test takers who practiced before taking the TOEFL test. Based on the interview with the participants, both test takers had variety of practice for the TOEFL test. Some participants took TOEFL preparation class to learn the strategy in answering the TOEFL test. The other participants just practiced by using the book of TOEFL preparation that includes many questions alike in TOEFL test, even few of them followed the online prediction TOEFL test sometimes.

Self-efficacy

The last component of problem solving in this study is self-efficacy. 100 % of high achievers test takers were sure that they could get the good score in their TOEFL test. Meanwhile, 73.3 % of low achievers test takers who believed that they could do well in TOEFL test in order to enable to achieve the good score for their TOEFL test. It shows that the high achievers test takers have more self-confidence in the test so that it solves their anxiety in the test. Since they have done much practice so they got more self-confidence; that is why they were surer to be success in TOEFL test.

Statement	High Achievers	Low achievers
I'm sure I can get the good score in the test.	100 %	73.3 %

Table 5. The result of problem solving for self-efficacy component

On the other hand, some low achievers test takers did not have self-confidence to get good score in TOEFL test. Some of test takers said that they were not sure with their skill in English proficiency. They said they had lack of vocabularies; this would make them hard in reading section since reading section has the long text that should be understood by the test takers. Besides that they also said that they could not listen well to people talking in English. Therefore, they were not really sure that they could get the high score in TOEFL test.

Based on the findings and discussions above, we can say that high achievers can get the good result in their TOEFL test because they solve their problem in better way rather than the low achievers test takers. To overcome test anxiety that can impact their test, the high achievers test takers solve their problem in these ways; deciding the strategies before the test; predicted the possible questions in the test; thinking about the purpose of the test and how to get a good score; trying to understand the questions before answering them; understanding each section before answering the questions; use more than one test strategies; checking their answer and correcting it if they got mistakes; concentrating as hard as they can in the test; practicing as much as possible; and having self –confidence to get the good result.

Meanwhile, for low achievers test takers, they did not think about the possible questions in the test and how to get the best result in the TOEFL test. Besides that, they did not check their answer before submitting their answer so that they got more mistakes in that test. The low achievers test takers also did not practice much for their TOEFL test, as a result they have lack of confidence and make them more anxiety about the test and influence their scores.

CONCLUSION

Therefore, in conclusion, the problem solving between high achievers and low achievers test takers are different so that it give impact to their scores. The difference occurs in planning, cognitive, self-efficacy and self-checking problem solving. These components related to metacognition skill of test takers, in which it is caused by their prior knowledge and experienced.

It is true that the test anxiety cannot be denied as long as we have high expectation about the result of the test. Hence, the researcher suggests that, the test takers should overcome that anxiety well so that they will perform well in the test either. The test takers should have a good skill to solve the problem they have even the possible problem they have imagine before the test. It is better for them to recognize the problem first, and then prepare the strategies to solve those problems. Moreover, for further researchers, the researcher suggests them to conduct a research about how test anxiety influences the result of the test so it will open test takers eyes about their anxieties.

REFERENCES

- Ali, Arman & Muhammad Zuhri Dj. 2015. Think Aloud Pair Problem Solving (Tapps) Strategy in Teaching Reading. Indonesian EFL Journal Volume 1, Issue 2. P-ISSN: 2460-0938; E-ISSN: 2460-2604.
- Blankstain, Kirk, R, et al. (1992). Coping and academic problem-solving ability in test anxiety. *Journal of Clinical Psychology* 48(1):37-46. DOI: 10.1002/1097-4679(199201)48.
- Brown, D. (2004). *Language assessment: Principles and classroom practice*. UK: Longman.
- Cassady, C. J., & Johnson, E. R. (2002). Cognitive test anxiety and academic performance. *Contemporary Educational Psychology*, 27, 270–295. <http://dx.doi.org/10.1006/ceps.2001.1094>
- Chen, T. Y., & Chang. G. B. (2004). The relationship between foreign language anxiety and learning difficulties. *Foreign Language Annals*, 37(2), 279-288.
- D’Zurilla, T. J., & Nezu, A. M. (1982). *Social problem solving in adults*. In P. C. Kendall (Ed.), *Advances in cognitive-behavioral research and therapy* (pp. 201-274). New York: Academic Press.
- Frauenknecht, M., & Black, D. R. (2003). *The social problem-solving inventory for adolescents (SPSI-A): A manual for application, interpretation, and psychometric evaluation*. Ostema, MI: SPSI-A, LLC.
- Hussein, E. (2005). Listening comprehension and anxiety in the Arabic language classroom. *Modern Language Journal*, 89(2), 206-220.
- Karyotaki, Maria & Athanasios Drigas. (2016). Online and Other ICT-based Training Tools for Problem-solving Skills. *International Journal of Emerging Technologies in Learning (iJET)*. 11(6), 34-39. <http://dx.doi.org/10.3991/ijet.v11i06.5340>
- Kitchenham, A. (2008). The Evolution of John Mezirow's Transformative Learning Theory. *Journal of Transformative Education*, 6(2), 104-123.
- Mayer, R.E., & Wittrock, M. C. (1996). *Handbook of Educational Psychology*. New York: Simon & Schuster Macmillan.
- Mehdinezhad, Vali & Bamari, Zainab. (2015). The Relationship between Test Anxiety, Epistemological Beliefs and Problem Solving among Students. *New Approaches In Educational Research*. 4.(1). pp. 2-8 DOI:10.7821/naer.2015.1.97
- O’Neil, Harold F & Schacter, John. (1997). *Test Specifications for Problem Solving Assessment*. California: University of California.
- Ohata, K. (2005). Potential sources of anxiety for Japanese learners of English: Preliminary case interviews with five Japanese college students in the U.S., *The Electronic Journal for English as a Second Language*, 9(3), 1 - 21.
- Olatoye, R.A and Afuwape, M.O (2003). Test anxiety as determinants of examination under achievement among some Nigerian secondary school students. *Journal of Education studies*, 3 (182), 32-39.
- Weir, C. J. (2005). *Language testing and validation: An evidence-based approach*. Basingstoke: Palgrave Macmillan.