

# The Effect of Anxiety and Mental Toughness Toward Bataknesse Student's English-Speaking Ability of Tenth Grade at SMA N 3 Nagasaribu

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## Abstract

*The purpose of this research is to know the Effect of Anxiety and Mental Toughness to The Speaking Ability Grade Ten at Sma Negeri 3 Nagasaribu. This research uses quantitative research to collecting data from observation and test. The data collected in this research are analyzed by using t-test. The researcher use two classes in getting the data, first class X-A as control class and X-B as experimental class. Experimental class is used to find the effect of anxiety and mental toughness with using PBL approach to the students' speaking ability. The number of samples in this research was 60 students. In answering the problems, the research, the research had analyzed the data to get the result of the effect of anxiety and mental toughness to the students' speaking ability or not. Then, the researcher got the result in T-test. From the result T-test, it shows that by using project-based learning technique more significant to the students' speaking ability.*

**Keywords—** Anxiety, Mental Toughness, Speaking Ability, Project Based Learning

## I. INTRODUCTION

English is an important language with global significance in the modern world. It serves as the language of international communication, science, technology, business, the internet, education, entertainment, diplomacy, and travel. Learning English provides many opportunities for personal and professional growth, and it plays a significant role in shaping culture and literature worldwide. As a result, it is crucial for individuals to have a good grasp of the English language to stay relevant and competitive in the modern world Abduganieva (2020)

There are four skills in English learning; they are speaking, listening, writing, and reading. However, this time the researchers discuss the speaking skill. The researchers think that speaking skill is very important which the students must master because the researchers assumed that speaking is the one communication access if the students meet the other people from the other country (Harmer, 2012). Verbal ability also becomes the main objective of

language learning, especially in senior high school in Indonesia. Students of senior high school are required to master the speaking after graduating from their school to have the option to convey in English. As indicated by KTSP (School-Based Curriculum) of English for Senior High School, speaking must be instructed to the students since it is one language expertise other than reading, listening, and writing. Besides, students are relied upon to have the option to convey English well (Muslich, 2008).

Speaking is portrayed as the action as the capacity to communicate in the circumstance, or the movement to report acts or circumstance in exact words or the capacity to speak or to communicate an arrangement of thoughts easily (Duck & McMahan, 2016). Based on the Competence-Based Curriculum is one of the four abilities that the students should increase well. It has a significant job in correspondence. Speaking can discover in the spoken cycle, particularly and joint construction of the text stage (Muslich, 2008). In completing speaking, students

face a few challenges. One of them is about language itself. Indeed, most of the students get challenges to talk even though they have a ton of vocabulary and have kept in touch with them well. The issues are apprehensive for students to commit errors. Speaking is the most troublesome part for the students when they become familiar with the English language (Boers & Webb, 2018). Numerous students of senior high school despite everything experience issues in communicating in English, although they should ace it after moving on from their schools to have the option to convey. Even though students have learned English for a considerable length of time, huge numbers of them are yet inadequate to utilize English orally. The constraint of chance might bring these to rehearse, absence of jargon, mental variables which more worry to the dread of committing errors when communicating in English, and improper technique for the quality of the students.

Generally, anxiety refers to unpleasant feelings that attacks human emotion and psychologically leads to negative assumption, apprehension, nervousness, and low self-confidence. Anxiety is often labeled as characteristic/trait or state in the area of educational research (Woodrow as cited in Gopang, Bughio, Umrani, & Lohar, 2015). It is a common phenomenon that occurs in an English classroom and is recognized as distress of the mind encounters a person generated from feelings of uneasiness and fear of specific circumstance (Suleimenova, 2012). Anxiety in children can be caused by a variety of factors, including genetic predisposition, learned behaviors, environmental factors, and biological influences. Some children may inherit a tendency to experience anxiety from their parents, while others may mimic anxious behaviors from being around anxious people. Anxiety can also develop after a stressful event, such as death, sickness, frequent changes of home or school, bullying, or abuse. Additionally, anxiety can be a co-occurring condition alongside depression, attention-deficit/hyperactivity disorder, autism spectrum disorders, eating disorders, and other mental health conditions. The ability to speak a student is also very determined by mental conditions. with the condition of anxiety and mental disorders that can interfere with the development of children, it is necessary to take an approach to overcome it. Research has also investigated teachers' use of strategies directed at helping shy students to overcome their difficulties in school (see Coplan & Rudasill, Citation2016 for a review). In one of the earliest studies, Brophy and Bohrkemper (Citation1989) interviewed a sample of experienced teachers (n=98) about their general strategies for working with shy and withdrawn students in grades from kindergarten to 6th grade and also elicited the teachers' responses to vignettes

describing hypothetical shy students. Response categories were pre-selected and derived by the authors from a review of the literature and inspection of a sample of interviews with participating teachers. Three general strategies were commonly mentioned: modelling and instruction to encourage greater participation; attempts to provide a supportive environment for the child and boost his or her self-esteem; and shaping desirable behavior.

## II. REVIEW OF LITERATURE

### Speaking Ability

Speaking is a common activity in daily life. Speaking is the way to communicate and interact between speaker and listener. Lingga et al. (2020) defined speaking as the ability of humans to make sounds and express opinions from their minds. By speaking, the speaker delivers information and lets the listener know what the speaker talks about. In order for the listener to understand the information conveyed, the speaker must speak clearly. According to Prasetyaningrum et al. (2020), the goals of speaking are to tell the ideas, when the speaker initiates their talk then the listener understands the speaker is telling or sharing their ideas.

In the teaching and learning English process, the teacher always gives a chance to students to speak English and communicate with others. Even though students speak in their daily life, speaking in a foreign language can be a hard thing to do because there are some things that have to consider. According to Lingga et al. (2020), students consider that speaking is the most challenging skill to master because it requires preparation to speak well, such as knowing what topic to discuss with classmates, how to start it, how to extend the talk, and how to end the conversation or discussion with a polite way. Speaking skills are means as an indicator of students' success in learning the language. Speaking is a vital skill in communication that needs to be taught (Yoestara & Putri, 2019). Speaking is one of the most substantial components of language learning, and speaking is one of the productive skills that is extensively learned. Nazir et al. (2014) stated that speaking has always been a crucial skill. Speaking is the skill to convey or express something in a spoken language. Speaking skills are the abilities that deliver us the ability to communicate effectively. This skill allows the speakers to share their passionate, thoughtful, and convincing messages. Speaking is an interactive process of constructing meaning that involves producing, receiving, and processing information. Speaking is very important because by mastering speaking skills, people can carry out conversations with others, give ideas, and exchange information (Sadullaevna & Safarovna, 2020).

The brief conclusion from the point above, speaking is the way to communicate and interact between speaker and listener that a common activity in daily life. Even though speaking is an activity in daily life, speaking in a foreign language can be a hard thing to do. Students consider that speaking is the most challenging skill to master and speaking skills are means as an indicator of students' success in learning the language.

### The Important of Speaking

In the eyes of globalization era speaking skill is viewed as a form of the contributor is very wide in the world. This skill is the prevision so fundamental. Speaking is very important for everybody in looking for a job because spoken English is one of the qualifications if someone wants to find a job. Speaking is one of the English skills that is considered a very crucial and priority skill because it is one of the basic keys in communication. By mastering speaking skills, people can carry out communication, express ideas, purpose, opinion, and persuade other people.

Everyone needs speaking skill, whatever their profession, whether they are an architect, an engineer, businessman, scientists, teacher, etc. all those definitely need speaking skills in order to take an active part in the communication process and also to develop knowledge. For students speaking is one of the important skills that should be built and develop and also it is one factor that successful than the other skill in English. This statement is supported by Thorn bury, (2005: 1) "Speaking as a part of daily life that we take it for granted" it indicates that speaking is crucially needed or very important for every people.

The specific importance of speaking for students can be seen when the students have a conversation with their friend or they need to give their opinion directly for some topic that asks or teach by the teacher orally. It is also can be seen when we chatting with our friends, buying things in shops, asking directions in the street, discussing a problem, consulting with the supervisor, giving a seminar presentation and so on. All those activities will be hard to be done if speaking skill does not exist in a language. From all of the importance that has been stated above, can be inferred that speaking plays a crucial role whether for daily communication, maintaining the social relationship or even getting a job.

### The Purpose of Speaking

The English language always plays an important part in our lives because it facilitates communication. English is essential for kids, and it broadens their ideas, fosters emotional development, and enhances their quality of life by offering many options in life. Many people are

hesitant to speak English in front of others. Whereas some lack a strong command of the language, others simply do not feel at ease speaking English, despite knowing the language. This global language is literally required for everyone to understand and speak. English is especially important for working professionals and students in deciding their success in their various positions. English speaking abilities are essential for a student's academic life. Because English is a worldwide language, it is critical to instil at least some basic English-speaking skills. Students should strive to build exceptional speaking skills in this language as they progress through school or university (KRYPA 2022:1)

Students must be able to communicate in English, since it influences every aspect of their lives. Students with exceptional communication skills are better able to cope with other academic courses, and shape their personalities. A student or working professional who speaks English exudes confidence. It all adds up to one's personality. A strong command of the English language allows anyone to communicate effectively with others.

Once a student has mastered English, there is no stopping him from studying farther and becoming more educated. A student who is fluent in English can pursue higher education in any part of the world. A strong grasp of communication skills improves self-esteem. It is the channel via which humans can project their thoughts and perceive the thoughts of others. English speaking is more than just an academic talent for kids. It is a life skill that is best learned in the early stages of life.

A good vocabulary is required if you want to speak with ease. To successfully put anything on paper, you must concentrate on your vocabulary. Students must identify their areas of growth and design their learning journey in order to improve their English-speaking skills. If students have problems with any of these or related concerns, they must focus their efforts in these areas to attain the best results.

The academic curriculum is incredibly beneficial in learning English speaking as well as its application. Looking for materials outside the school curriculum is an intriguing and productive sort of blended learning. Students can also watch English movies, documentaries, series, and podcasts in addition to educational resources. This exposes students to both the formal and colloquial uses of the language.

### Methods in Teaching Speaking Ability

A teaching method is a set of principles and methods used by teachers to enable student learning. These strategies are determined partly on subject matter to be taught, partly by the relative expertise of the learners, and

partly by constraints caused by the learning environment. For a particular teaching method to be appropriate and efficient it has taken into account the learner, the nature of the subject matter, and the type of learning it is supposed to bring about Wikipedia (2017). There are some of approaches that may be used when instructing students on how to improve their speaking ability.

### 1. Audio Lingual Method (ALM)

The principle of Audio-lingual Method (ALM) can be applied in teaching speaking to young learners, since it holds an assumption that one can learn language by developing habits based on pattern of language (CelceMurcia 2001, in Linse 2005) and by emphasizing repetition and habit formation (Saville-Troike: 2006). The two important features of ALM are drill with choral response and dialogues. In drilling with corral response, the students will drill certain language feature, and then there will be a sentence substitution named choral response. Moreover, the dialogue provides the learners with grammatically controlled scripts. It can be applied in a child-friendly role-play. Besides, the teacher can also use puppets to introduce dialogue. It will be very beneficial for reluctant or shy students who tend to feel comfortable to speak with puppets, rather than with adults (Slattery and Willis 2003, in Linse 2005). Furthermore, the fishbowl technique can also be used to introduce young learners to work with partners or small group. This technique requires teachers to invite one volunteer to do the model activity with them, let the rest of the class see, and then the students will know what they are expected to do.

### 2. Communicative Language Teaching (CLT)

CLT is an approach and philosophical orientation that connects classroom-based language learning with the language that the learners need in order to enable the students to be able to speak outside classroom (Nunan, 2003 see also Richard, 2006). Further, one of the goals in CLT is to develop the fluency of the learners (Richard, 2006). Therefore, the teacher should be able to build classroom activities in which students must negotiate meaning, use communication strategies, correct misunderstanding, and work to avoid communications breakdown. The strategies in focusing on fluency in the classroom activities are summarized as follows (Richard, 2006):

- a. reflect natural use of language
- b. focus on achieving communication
- c. require meaningful use of language
- d. require the use of communication strategies
- e. produce language that may not be predictable

- f. seek to link language use to context

### 3. Anxiety

According to Davison GC (2008) anxiety, worry, restlessness, worry, or anxiety (psychological terms) are emotions characterized by an unpleasant state of inner turmoil, often accompanied by nervous behavior such as pacing, somatic complaints, and rumination. Anxiety includes subjectively unpleasant feelings of fear over anticipated events. Anxiety is a feeling of uneasiness and worry, usually generalized and unfocused as an overreaction to a situation that is only subjectively seen as menacing. It is often accompanied by muscular tension, restlessness, fatigue, inability to catch one's breath, tightness in the abdominal region, nausea, and problems in concentration. Anxiety is closely related to fear, which is a response to a real or perceived immediate threat (fight-or-flight response); anxiety involves the expectation of a future threat including dread. People facing anxiety may withdraw from situations which have provoked anxiety in the past Chand SP, Marwaha R (2022) The emotion of anxiety can persist beyond the developmentally appropriate time-periods in response to specific events, and thus turning into one of the multiple anxiety disorders (e.g. generalized anxiety disorder, panic disorder). The difference between anxiety disorder (as mental disorder) and anxiety (as normal emotion), is that people with an anxiety disorder experience anxiety most of the days during approximately 6 months, or even during shorter time-periods in children. Anxiety disorders are among the most persistent mental problems and often last decades. Anxiety can also be experienced within other mental disorders, e.g., obsessive-compulsive disorder, post-traumatic stress disorder Robinson OJ, Pike AC, Cornwell B, Grillon C (December 2019).

### 4. Types of Anxiety

Anxiety is a normal emotion. It's your brain's way of reacting to stress and alerting you of potential danger ahead. Everyone feels anxious now and then. For example, you may worry when faced with a problem at work, before taking a test, or before making an important decision Kristin Mitchell (2024). There are several types of anxiety disorders, including:

- a. Generalized anxiety disorder You feel excessive, unrealistic worry and tension about typical everyday tasks. These feelings can be constant.
- b. Panic disorder  
You feel sudden, intense fear that brings on a panic attack. During a panic attack you may break out in a sweat, have chest pain, and have a



pounding heartbeat (palpitations). Sometimes, you may feel like you're choking or having a heart attack. If you have an attack, you might be afraid of having another and might try to avoid certain triggers.

c. Social anxiety disorder

Also called social phobia, this is when you feel overwhelming worry and self-consciousness about everyday social situations. You obsessively worry about others judging you or being embarrassed or teased. If you have this disorder, you might stay away from social settings.

d. Phobias

You feel an intense fear of a specific object or situation, such as heights or flying. The fear goes beyond what's appropriate and may cause you to avoid ordinary situations.

e. Agoraphobia

You have an intense fear of being in a place where it seems hard to escape or get help if an emergency occurs. For example, you may panic or feel anxious when on an airplane, on public transportation, in closed spaces, standing in a line with a crowd, or just being away from your home.

f. Separation anxiety

Little kids aren't the only ones who feel scared or anxious when a loved one leaves. Anyone can get separation anxiety disorder. If you do, you'll feel very anxious or fearful when a person you're close to leaves your sight. You'll always worry that something bad may happen to your loved one. If you're older, you may have this anxiety after a traumatic event.

## 5. Causes of Anxiety in Student

According to Kathryn Watson (2022) it's normal to be anxious sometimes, but when anxiety interferes with your quality of life, or you experience it constantly, this may be the sign of an anxiety disorder. School can be a source of anxiety for many kids and young adults. It's a setting filled with expectations to succeed, large groups of people, opportunities for bullying, and more. School anxiety can cause students of all ages to feel overwhelmed at the thought of stepping foot on campus. The reason a child feels anxiety about school will vary according to their specific situation. Possible causes can include

- g. Social anxiety: Social anxiety is about concern about how one is perceived by others, usually peers. Academic anxiety typically does not have a

social component, but the two can overlap. Social anxiety can also impact a student's performance academically, creating a cyclical effect where the student is concerned about both.

- h. Bullying or cliques: A child may feel anxious about going to school because that is where they encounter bullying.
- i. Academic anxiety or testing: Children might be anxious about school because they don't feel like they are performing well enough, or they are worried about standardized testing.
- j. Past or ongoing trauma. Trauma (a divorce, a death in the family, or abuse) can cause students to feel anxious in school or in other group social settings. Students may also be traumatized by the news of school shooters and the need to go through safety drills for it.
- k. Separation anxiety: Younger children may not feel they are safe when separated from their caregivers, leading to school drop-offs that are difficult and upsetting for everyone involved. While some of this is a normal part of development in most children, it can reach detrimental levels.
- l. Generalized anxiety disorder: Sometimes school anxiety indicates that a child may have a generalized anxiety disorder, sometimes referred to as chronic anxiety. This type of anxiety might not be specifically related to school, but the child demonstrates symptoms in the school setting.
- m. Chronic health conditions: Children who live with severe allergies, are immunocompromised, or have a chronic pain condition may see school as a place where they are not safe. They may also be concerned their condition may keep them from succeeding in school activities. Several studies of students with chronic pain have found that they are more likely to try to avoid school due to anxiety.

## 6. Anxiety can Affect Learning Process

Anxiety is something that really determines students' success in learning. because if this appears in students it will have a big influence on their achievement. Anxiety is not always a problem. Mild anxiety can serve as a motivational tool encouraging children to do more or learn new things. High levels of anxiety on the other hand, significantly impede learning and reduce cognitive capacity. This means the ability to think logically and rationally and to solve problems is diminished. The physical and psychological symptoms associated with

anxiety make it very difficult for the child to focus on anything but their anxious thoughts and accompanying physical responses, such as nausea or having an increased heartbeat. As a result, anxiety affects memory and concentration and thus interferes with learning. It also disrupts relationships with peers, which can lead to a decreased sense of self Worth Albano, Causey & Carter (2001). Highly anxious children are primed to react to any small ‘risk’ or ‘danger’. As a result, they have difficulty relaxing and learning through active listening and observation. Moreover, when tasks require physical and mental effort beyond their capabilities, high levels of anxiety can cause overload, leading to panic, fear, anger, withdrawal and tears. In some cases, aggression and violence may follow.

### 7. Mental Toughness

Mental toughness is a measure of individual resilience and confidence that may predict success in sport, education, and the workplace. The concept emerged in the context of sports training, as one of a set of attributes that allow a person to become a better athlete and able to cope with difficult training and difficult competitive situations and emerge without losing confidence. The term has been used by coaches, sport psychologists, sports commentators, and business leaders Lin, Ying; Mutz, Julian; Clough, Peter J.; Papageorgiou, Kostas A. (2017-08-11). Mental toughness can be thought of as the applications of grit characteristics. Additional synonyms might include: resilience, determined, strong-willed, and stalwart. A person who has the qualities of mental toughness might accept challenges as they arise aiding them to achieve their goals whether that be in sports, academics, or in their professions.

According to Brudley Busch (2024) Mental toughness is much more about being aware of your emotions, and acknowledging your weaknesses so that you can improve. It is not wanting to be the best, believing you are always right, or being over-confident and loud. There are some way to improved mental toughness including: Students who show mental toughness are aware of and able to control their emotions. This helps them to think

clearly under pressure, in the lead up to and on the day of exams for example. One strategy to help with this is to encourage students to talk to themselves in a positive and helpful way. Students may be frustrated if they don’t do as well on an assignment as they had hoped. By asking themselves good questions, such as ‘what would I do differently next time?’, they can stop focusing on the negatives and concentrate on doing better next time. Many students are too embarrassed to ask for help, for fear they would show weakness by acknowledging they don’t understand something or are struggling. The Spotlight Effect may worsen this, whereby people think that other people notice and judge their behavior more than they actually do. However, recent researches shown that many people falsely believe that admitting to their own weaknesses makes them seem vulnerable – whereas others actually perceive it as a positive trait. Recognizing when they are struggling takes courage for students, but it also shows a willingness to learn and get better.

### III. RESEARCH METHODOLOGY

This study used quantitative research method. According to Ary (in Bertania 2018:11), “descriptive quantitative research use objective measurement to collect numerical data in order to answer questions or conduct planned test”. Experimental or non-experimental research design are categorized as experimental or non-experimental for descriptive quantitative research. According to Ary (in Bertania 2018:11), is the overall strategy for conducting en experimental with an active independent variable. In this study, the researcher selected two classes: one as an experimental class using the PBL approach, and the other class as a control class without the technique.

### IV. FINDING AND DISCUSSION

#### A. Control Class (XA)

After applying the pre-test and post-test to the control class (XA), the researcher gained the students’ scores. The result of the pre-test and pos-test can be seen in table.

Table 4.1 The result pre-test and post-test of the control class

Student (N)	Pre-test (Y <sub>1</sub> )	(Y <sub>1</sub> ) <sup>2</sup>	Post-test (Y <sub>2</sub> )	(Y <sub>2</sub> ) <sup>2</sup>	d (Y <sub>2</sub> -Y <sub>1</sub> )	d (Y <sub>2</sub> -Y <sub>1</sub> ) <sup>2</sup>
1.Christian	50	3025	60	3600	5	25
2.Willy	55	3025	65	4225	10	100
3.Herlina	50	2500	60	3600	10	100
4.Jovan	50	2500	55	3025	5	25

5.Afrito	45	2025	55	3025	10	100
6.Ranggari	60	3600	65	4225	5	25
7.Feby	50	2500	60	3600	10	100
8.Krisjoner	50	2500	50	2500	0	0
9.Dwirani	50	2500	55	3025	5	25
10.Henry	40	1600	50	2500	10	100
11.Haykal	45	2025	50	2500	5	25
12.Jevanya	45	2025	60	3600	15	225
13.Marchel	65	4225	75	5625	10	100
14.Reyna	60	3600	70	3600	10	100
15.Fauzan	85	7225	90	8100	5	25
16.Niko	85	7225	85	7225	0	0
17.Natalia	65	4225	70	4900	5	25
18.Nazlia	60	3600	65	4225	5	25
19.Sonia	70	4900	70	2500	10	100
20.Choky	60	3600	60	3600	0	0
21.Clara	55	3025	60	3600	5	25
22.Esra	55	3025	55	3025	0	0
23.Deby	60	3600	65	4225	5	25
24.Zhahira	70	4900	80	6400	10	100
25.Rayhan	50	2500	55	3025	5	25
26.Dara	50	2500	60	4225	10	100
27.Lasma	60	3600	70	6400	10	100
28.Riza	45	2025	55	3025	5	25
29.Stifen	40	1600	50	2500	10	100
30.Jefri	40	1600	55	3025	5	25
N=30	$\sum(Y_1)$ =1665	$\sum(Y_1)^2$ =96124	$\sum(Y_2)$ =1880	$\sum(Y_2)^2$ =119650	$d\sum(Y_2-Y_1)$ =200	$d\sum(Y_2-Y_1)^2$ =1750

According to the table, the control group has a range of scores on the pre-test, with the greatest score being 85 and the lowest score being 40. The students will be required to speak a passage using the project-based learning for the pre-test. The post-test included a range of possible scores, with the greatest being 90 and the lowest being 50. In the first year (MY1), the mean score on the pre-test was 55.5, and in the second year (MY2), the mean score on the post-test was 62.6%. The mean score on the pre-test was lower than the mean score on the post-test. It indicates that the students in the control class were able to improve their speaking ability.

### B. Experimental Class

After applying the pre-test and post-test to the experimental class (XB), the researcher gained the

students' scores. The result of the pre-test and post-test can be seen in the Table 4.2

According to the table, the pre-test scores for the experimental class ranged from a high of 80 to a low of 30, with 80 being the maximum possible score. During the post-test, the students will not be able to speak a passage conversation without project-based learning. The posttest includes a range of possible scores, with the greatest being 90 and the lowest being 60. The average score on the pre-test (MX2) was 16.12, whereas the average score on the pre-test (MX2) was 77.66. It indicates that the students in the control class where able to improve their abilities after studying the lesson utilizing the traditional way of teaching, with control the anxiety.

Table 4.2 The Result of Pre-test and Post-test of the Experimental Class

Students (N)	Pre-test (X <sub>1</sub> )	(X <sub>1</sub> ) <sup>2</sup>	Post-test (X <sub>2</sub> )	(X <sub>2</sub> ) <sup>2</sup>	(X <sub>2</sub> -X <sub>1</sub> )	D (X <sub>2</sub> -X <sub>1</sub> ) <sup>2</sup>
1. Rentina	80	6400	90	8100	10	100
2. Rezky	65	4225	85	7225	20	400
3. Novaldy	50	2500	75	5625	25	625
4. Okto	70	4900	80	6400	10	100
5. Gabby	80	6400	80	6400	0	0
6. Denovan	80	6400	85	7225	5	25
7. Asyiva	75	5625	85	7225	10	100
8. Grecia	80	6400	85	7225	5	25
9. Yassa	75	5625	90	8100	15	225
10. Rafika	50	2500	70	4900	20	400
11. Rizky	70	4900	80	6400	10	100
12. Grece	70	4900	80	6400	10	100
13. Nicholas	70	4900	80	6400	10	100
14. Gabriel	65	4225	75	5625	10	100
15. Rizky	55	3025	70	4900	15	225
16. Rizky	55	3025	70	4900	15	225
17. Benardo	65	4225	80	6400	15	225
18. Bayu	70	4900	85	7225	25	225
29. Gibson	40	1600	65	4225	20	225
20. Selma	50	2500	70	4900	15	400
21. Nasya	65	4225	80	6400	15	225
22. Sri	60	3600	75	5625	35	225
23. Salsabila	30	900	65	4225	25	1225
24. Rizky	50	2500	75	5625	20	625
25. Rismauli	40	1600	60	3600	25	400
26. Rafira	45	2025	70	4900	20	625
27. Ayu	60	3600	80	6400	20	400
28. Ardian	60	3600	80	6400	20	400
29. Nikita	65	4225	85	7225	20	400
30. Bryan	75	5625	80	6400	5	22
N=30	$\sum(X_1)1865$	$\sum(X_1)^2=121075$	$\sum(X_2) = 2330$	$\sum(X_2)^2=182600$	$d\sum(X_2-X_1) = 465$	$d\sum(X_2-X_1)^2=8875$

### C. Research Findings

After finishing analyzing the data, some findings can be formulated as follows below which can answer the research problem, namely:

1. Based on the data above, the control class average is 6,66 and the experimental class average is 15

2. The standard deviation of the control class is 416.67 and the standard deviation of the experimental class is 1667.5
3. Students' scores after applying the treatment increased in experimental class

The degree of freedom in this study was 58, which can be calculated using



the formula  $N_x + N_y - 2 = 30 + 30 - 2 = 58$ . It was determined through the use of the computation that the t-observed is greater than the t-table ( $3,69 > 1,672$ ). It indicates that the calculated value is greater than the t-table, which leads to the conclusion that the alternative hypothesis ( $H_a$ ) is accepted while the null hypothesis ( $H_o$ ) is rejected. This indicates that there is a substantial effect of anxiety and mental toughness in speaking ability at SMA N 3 NAGASARIBU

#### D. Discussion

Based on the research problem about the effect of anxiety and mental toughness in speaking ability, the researcher discovered that the project-based learning techniques in teaching speaking ability effectively solves that the students have when speaking English. Students become more engaged, interested in actively participating, and like participating in group activities when they are trying to control the anxiety and mental toughness. Students may find that they are more motivated to comprehend the content when they employ the project-based learning approach as an alternative to learning strategies that are based on speaking ability.

This approach is crucial in boosting students' knowledge, particularly with regard to the controlling the anxiety and mental toughness of speaking ability, according to the findings of a hypothesis test conducted in the experimental class employing the PBL. It is possible to deduce this from the fact that the value of the experimental class is greater than that of the control class. It indicates that controlling the anxiety via the use of project-based learning is more successful than instructing speaking through the absence of this technique.

#### V. CONCLUSION

Based on the results of the data analysis, the conclusions drawn from the results of the study as follow

1. Using the PBL approach to control the anxiety and mental toughness for speaking ability is more successful than not using the PBL technique, as shown by the students' test scores
2. The post-test score of the experimental class were higher than those of the control class
3. Observation revealed that the majority of students were more active, interested in engaging actively, and enjoyed group activities
4. The researcher concludes from this study that if teacher use the project-based learning strategi in the teaching and learning process, students would successfully acquire English classes

5. The researcher concludes from this study that students will receive the greatest benefit if the PBL approach is used in teaching and learning process.

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