

## The Effect of Higher Order Thinking Skills (HOTS) Questions on Student Writing Skills at SMA Negeri 3 Pematangsiantar

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### ABSTRACT

The objective of the research was designed to find out the students' ability in writing descriptive text by using HOTS questions at 8th grade in SMA Negeri 3 Pematangsiantar. It deals with content, organization, vocabulary, language use, and mechanics. The problem of this research was "to what extent does the students writing ability based on the application of HOTS questions? This research was designed as a quantitative research. The sample of this research was taken from two classes that consist of 66 students (33 students in experimental group in class 10 IPA 7 and 33 students in control group in class X IPS 1. Then quantitative data were obtained from the students' writing score of pre-test and post-test. The research finding of this research showed that there was an improvement on the students' writing ability in descriptive text based on HOTS questions. It can be seen from the mean score of pretest was 52.75 and the mean score of post-test was 80.51. And the researcher also found that t-test is higher than t-table it can be seen from df: 64 (33+33 -2) with the t-table is 1.25 and the level of significance 0.05. It shows that t-test is higher than t-table (1.27 > 1.25). After analyzing the data, the researchers concluded that using HOTS questions could develop the students' writing ability in descriptive text at 10th grade in SMA Negeri 3 Pematangsiantar.

## **INTRODUCTION**

Speaking, writing, reading are fundamental to normal existence, in which language is the primary device for expression and communication. Studying how human use language what words and terms they unconsciously select and integrate can help us better apprehend ourselves. Students need to learn language especially English as Foreign language. There are some skills have to mastered as student learn English language, namely reading, speaking, listening and writing. The research focus the only thing about collect student ability in writing skill.

In the context of this research, the research will most effective recognition on descriptive text. Descriptive text is a textual content that describes the function of a person, something or place. Descriptive text include identity and descriptions. Identity is a element of a paragraph that introduces the person, and outline is the part of paragraph that describes the man or woman. The students can use simple present and adjective clause in writing in descriptive text, there are a nuber of students often discover some problem.

The students typically sense difficult to prepare their thoughts and also the students have low motivation due to the fact there is no media that can assist them to prepare their thoughts. The others problem in writing descriptive textual context there are composing sentence, grammatical in structural sentence, spelling, deleting phrases and enhancing sentences. Therefore many students made a few mistakes and confronted problems to construct and envolved their creativeness.

Based on the research experience that was conducted in teaching practice at SMA Negeri 3 Pematangsiantar, many Senior High School students have difficulty in writing descriptive text. Some problems they got are how to write correctly, especially in choosing a pharse or vocabulary to make it in the sentence, the others problem are composing sentence, grammatical in structural sentence, spelling, deleting pharases and enhancing sentences. When the researcher give assignments to 35 students to make descriptive text the most who answered with an a common score were only 10 students, with a score of 75, even as the 25 students score below avarage. The away that the teacher can do to build thoughts and broaden students' imaginations in writing description text, the research use of Higher Order Questioning ability (HOTS) questions.

The Higher Order Thinking Skill (HOTS) getting to know strategy is a seen as a greet approach for polishing the ability of students of write at the same time as honing their questioning abilities. Higher Order Thinking Skill studying is one studying strategies within the form of movement plans consisting of using techniques and utilization of diserve resources / strengths within gaining knowledge . this learning method has a fixed of studying steps that are directed to enhance the technique and student mastering consequences. In English languge coaching, higher order thinking skill aid the students to extra without difficulty analyze english langunge specially in writing skill.

In addition Collins (1991) argumentation saying that the integration of critical thinking in language learning will developed college students' . writing skill (Setyarini et al., 2018). Moreover, writing ability is very valuable in pharase

of communication. Communication between humans could be very complicated that is in which writing skill taken role. Writing skill have an effect on student to produce and carry data thoughts properly. Combining writing ability and higher order questioning capabilities then will assist the student on handing over the students' idea without problems in written form.

Therefore, by applying this HOTS questions, hopefully this media can solve students' difficulties in writing, caused by their lack of mastery of grammar and vocabulary, build ideas and develop their imagination. That's a good influence on their writing. Based on the statement above, researchers are interested in conducting research –Improving Students' Writing Ability Based on HOTS Questions at 10th Grade in SMA Negeri 3 Pematangsiantar.

## LITERATURE REVIEW

### **Provide Clear and Concise Versions of Your Methods of Conducting Resear Writing**

#### **1. Defenition of writing**

Writing is one of the four language abilities besides listening skill, speaking, and reading skill in language teaching. Writing can be described as a procedure of transforming thought into written language (Tiwari, 2005:120) in other pharses, writing is technique of expressing thoughts, wondering or feeling in phrases on the piece of paper. Inside the method of writing, the students want to have sufficient thoughts, organize them well and explicit them in suitable style.

Furthermore, Gaith (2022) states that writing is a complicated procedure that allows writers to explore idea and cause them to visible and concrete on the piece of paper. Writing gives a completely unique opportunity to discover thoughts and gather facts. By way of writing, someone can explicit His mind more communicable. From the reason above, it may be concluded that writing is complicated technique of remodeling notion and ideas, questioning how to specific them and organizing them into declaration and paragraph to make them visible and concrete at the piece of paper.

#### **2. The importance of writing**

Writing is a complex process, it approach that during wriing the students need to collect many thungs to build a great writing. According to Harmer (2004:31-33) states that there are many significance of mastering writing :

- a. Writing isn't frequently time certain inside the way verbal exchange. In writing sports, the scholars have more time to think than they do in speaking activities. They could express what they recognize in their thoughts, and even the students use dictionaries, grammar books or different reference material to help them.
- b. Writing encourages students to attention on acurate language use. It is a good way for the students to broaden their language when they write down what they think or explicit their ideas with the accurate language.
- c. Writing is often used as a means of reinforcing language that has been thought.

In coaching writing, the instructor frequently ask the student to write sentence or paragraph the use of lately learn grammar. The students need to make a observe about what they have got learn at the same time as getting to know system occurs.

Make the students capable of understand about the language that has been idea.

- d. Writing is frequently beneficial as instruction for some others activity.
- e. Writing can be used as an indispensable part of a larger interest in which the Focus is on something else which include language exercise, performing out or talking. When the students write a brief dialogue, the students can also exercise and act out their dialogue on oral activities.
- f. Writing is also use in question and answer activities. In coaching writing, the teacher often offers questions to the students. For instance approximately their know how or approximately the last material. The students prepare first to discover the solution and in addition they write down the answer then presentation the answer in the front of the class. Within examination he students also answer the questions inside the form of written.

From the rationale above the writer can conclude that writing skill may be very critical to be learnt. Writing facilities someone to discover their thoughts, feelings and mind in a written shape. Expect that writing enables a person in fixing and ehanching other ability in gaining knowledge of language.

### **3. The process of writing**

Harmer (2004:4-5states that there are four steps in process of writing. There are:

#### **a. Planning**

Planning is an critical process in the writing method. In planning system, the author has to think about three troubles.

##### **1. The cause of writing**

It is important to know the motive of writing on the grounds that this will influence to an awesome writing result. By way understanding the motive of writing, someone can decide the most suitable style of the language, therefore, the result will be powerful to attain the purpose.

##### **2. The audiences they're writing for**

The audiences here as the readers of writing. The audience will impact language style, diction, paragraph shape, etc.

##### **3. The content structure of the writing**

How best the collection records, ideas, or arguments which they've determine to consist of.

#### **b. Drafting**

Drafting approach getting thoughts at the paper in sentences and paragraph. Inside the writing process, drafting is important for supporting

the author to write ideas and determine what need to come first, second, third until the last.

c. Editing

In editing process the writer read once more what they have got written as a draft. Every other readers remark will help the writer to make suitable revision. Here, the writer may additionally change what the writer have written the event that they locate something terrible. For instance, the information is not clear, the grammar is inaccurate, the diction isn't suitable, etc. The writers are able to alternate or accurate it if they discover the ones situations.

d. Final version

Final version is the final step of writing. This will appearance exclusive from the first draft that has been made earlier than due to there are many adjustments in modifying tactics. But the writer is ready to send the written text to the readers.

From on the explanation above, it can be concluded that there are

Four steps or process in writing. They are : making plans, drafting, editing and final versions.

#### 4. Components of writing

Writing desires some components to make it correctly and has meaning. Components of writing are very critical to make our writing clear and easy to understand for audience. There are 5 components of writing with the aid of Harmer (2004) :

1. Organization

It carries reasonable sentences that guide the subject matter of the writing. Organization is wanted to apprehend the meaning of textual content. If the concept and sentences are nicely prepared it could be understood by using the reader.

2. Content

Content refers to the sentences that flow easily and is not very tough to understand. Affordable sentences or ideas that are arranged into a properly tale refer to supposed by using the content. The content material also consists of the concept of the writer. It means that what writer goes to carry ideas to the reader

3. Grammar

Grammar is connecting with how the phrases are arranged into top sentences. Suitable way correct within the tenses and has meaning. Some students were given the trouble in grammar. This happen because some of them are nevertheless stressed what verbs that need to be used inside the sentence. They cannot differentiate among the verbs that need to be implemented in step with instances.

4. Punctuation

Punctuation or spellings are important in writing. It is wanted to make their writing sounds affordable to be study. We need placed capital letter, commas, and point in our writing.

5. Style

Style offers with the particular vocabulary utilization and the use of parallel shape. Vocabulary takes critical role in english. Vocabulary is the basic aspect that have to be owned through the students. Without that, they can not do many kinds of english responsibilities. The shortage of vocabulary approach the failure within the communication.

**5. Teaching writing**

According to Harmer (2004:41-42) states that there are a few teacher tasks in teaching writing:

a. Demonstrating

The teacher has to be able to make the students aware about the language used or others to recognise writing feature by means of using whatever the approaches.

b. Motivating and Provoking

The teacher has to motivate and initiate their students to start writing and help them discover their motivation. The student sometimes lost their idea, inspire and self belief. As the teacher must to assist them to locate encourage their motivate back.

c. Supporting

The teacher has to help the students if they get hassle and teacher must help to solve their problem.

d. Responding

The teacher has to give response or concept to the students writing draft.

e. Evaluating

The teacherr has to evaluate the student's task so that it will recognize the students information.

**Text**

Language is constantly produced, exchanged or get hold of as a textual content; that is language as a machine of communique is prepared as cohesive units we name texts. A text is any finished act of communication which includes a greeting between buddies in the street a television advertisement, a unique, or a film and so forth .

Asfar as speech and writing are concerned a text stands alone as an act of conversation, (Knapp and Watkins 2005:29).

**Genre**

According to Hyland(2004:15) stated that style is a term for grouping texts collectively, representing how writers commonly use language to respond to ordinary conditions. Each genre has a some of functions which make it exclusive to different genres : every has a particular motive, an typical shape, unique linguistics features, and is shared by contributors of the culture for many human beings, it is an intuitively attractive concept which helps to arrange the common place feel labels we use to categorize texts and the conditiond where they occur. A genre can define as a culturally precise text-kind which ends from the usage of language (written or spoken) to assists accomplish some thing. It takes vicinity

via a sequence of levels, and uses language mainly ways. It method that genres are culture particular, and have related with precise functions, specific tiers, and unique of linguistics features.

Furthermore Knappand Watkins (2005:37) stated that —style is the social context and relation in which texts are produced. Genre is classified consistent with their social cause and it recognized of the social contexts which provide existence to texts and this is more critical than their formal patterns. It is critical, but, now not to overestimate style flexibility. There are thirteen genres in writing, they're : recount, spoof, report, analytical, exposition, anecdote, narrative, system, descriptive, hortatory exposition, clarification, dialogue and evaluate. Each style has a variety of characteristic and it has the specific motive which makes it one of a kind from other style. On this examine, the researcher handiest focuses on the genre of descriptive textual content

## **Descriptive Text**

### **1. Defenition of Descriptive Text**

According to Kane (2000: 352) is defined Description is about sensory Revel in how somethinh seems, sounds, tastes, on the whole it;s milesapproximately visible revel in, but description additionally deals with different sorts of notion. however specially, the descriptive textual content is, is a textual content which says what a person or a thing and place.

So, it can be said that this descriptive textual content is a textual content that explains approximately whether or not someone or an item is like, whether its form, its properties, its amount and others. The motive of the descriptive textual content is clear, this is to explain, represent or reveal someone or an object, both summary or concrete.

### **2. Generic Structure of Descriptive Text**

while writing descriptive textual content, there are a few widely wide-spread systems (clearly not mandatory) for our writing to be actual. The arrangement are:

1. Identification :includes about the intoduction of a person,thing,place, animal or object could be described
2. Description:carries an outline of something consisting person ,animal, things, place by means of describing it's features,form,colorings,anything related to what the writer describe.

### **3. Language of Features of Descriptive Text**

1. Specific Participant :  
Has a sure item, isn't always not unusual and particular (only one) for example : Bandengan seaside, my residence, Borubudur temple, Uncle Joe.
2. The usage of the adjecttive (an adjective) to make clear the noun, for instance : a lovely beach, a good-looking man, the well-known vicinity in Jepara, and Many others three.
3. The use of simple gift tense : the sentence pattern used is easy present as it tells the fact of the item described
4. Action verb : verbs that display an activity( as an example, read, swim, dance and etc.)

5. Use adverbial phrases : adverbial phrases used to upload many statistics approximately way, vicinity or time and sometimes found out in embedded clause which capabilities as circumstances.

Example : He reads neatly, derickson swim fast and many others.

#### **4. Example of Descriptive Text :**

##### **Singapore is a south-east Asian Country located between malaysia and Indonesia**

In spite of its small size, Singapore is known for its transition as a third-global US. To the primary-world country. Singapore also changed into known as the Asian Tiger Economy, based on external alternate and its staff. Singapore length isn't always as massive as Indonesia, but the metropolis ranks surprisingly in severa international scores for its training, leisure,finance,healthcare,human capital, innovation,logistic,manufacturing, era, tourism,trade, and shipping. Singapore is home to five. 6 milion human beings with a numerous way of life. Majority ethnic groups in Singapore are chinese, Malay, and Indian. Singapore Independence Day became at the ninth of August 1965. Merlion Statue is the official mascot of Singapore. Singapore is well-known for its garden via the Bay, Marina Bay Sands, dan Orchard avenue (description)

#### **Hots (Higher Order Thinking Skill)**

Higher order thinking skill(HOTS) is a concept famous in american education.it distinguishes vital thinking skills from low-order getting tto know outcomes, which includes those attained through rote memorization.Hots include synthesizing, analyzing, reasoning, comprehending, software, amd evaluation. HOTS is primarily based on diverse taxonomies of studying, spefically the one created with the aid of Benjamin Bloom in his 1956 book, "Taxonomy of educational goals. The type of educational desires. "higher order thinking skill are contemplated by way of the top three levels in Bloom's Taxonomy :

Evaluation,synthesis, and assesment. Bloom's Taxonomy became designed with six degrees to sell Higher order thinking. The six levels were: information, comprehension, application, analysis, synthesis, and evaluation. (the taxonomy's levels were later revised as remembering, undersanding, applying studying, revising, and developing. The higher order thinking skills (Hots) involve memorization, while Higher Order Thinking requires knowledge and making use of that expertise

The top three levels of Bloom's taxonomy which is regularly displayed as a pyramid,with ascending levels of thinking at the pinnacle of the structure are analysis, synthesis, and evaluation. These levels of the taxonomy all contain crucial or higher order thinking. Students who are able to assume are those who can follow the knowledge and abilities they have got discovered to new contexts. Searching at each stage demonstraes how higher order questioning is implemented in education.

Moreover Brookhart (2010) mentions the higher order thinking skill have three parts:

1. Higher order thinking skill in terms of transfer

2. Higher order thinking skill in terms of critical thinking
3. Higher order thinking skill in terms of problem solving

In the first part students not only have knowledge and skill but in addition students apply their knowledge in to real situations like outside classroom. The abilities to decide what to do by way of thinking about the motive, research, remark and comprasion from numerous points of view is higher order questioning skill in time period of vital questioning. And terms of problem fixing is the talent that is considered as ability owned by a student or person to find a proper solution of their problrm that cannot be sincerely solved most effective by reminiscence or components .

### 1. The importance of HOTS Questions

It is easy to assume that students who seem to move through responsibilities fast have all of the skills they want. The teacher may suppose those students have litle extra to develop. The development of cognitive and metacognitive competencies has no ceiling. There's always more for excessive capability students to research and room for them to grow. If students exceed curriculum stage outcomes, responsiilities may be made grater tough by way of concetrated on higher order thinking. This can set the situations for students to increase their studying .

Dillon (1988) as noted in Shen &Yodkhumlue (2011) highlighted that the most powerful method of effective coaching which could active coaching which could active students mastering and thinking, in addition to aid the teacher to understand their students gaining knowledge of strategy is through query. Consequently, teachers performs a vital position in composing questions for the students in their each day exercise, which suits to their level understanding. the teacher desires to be aware on the difficulty level of the question and the students' cognitive boom.

Collins (2014) labelled that teacher are super at thinking spontaneously, however without well guidance and goal in thoughts, they'll likely asking and questions that are not stimulate students higher order thingking. A good share of questions is best,where not every questions and dialogue has to be pitched at higher order thinking, Collins (2014) introduced,the questions need to be constructed to encourage students' to reflect on their studying, to be able to permit them to renowned their thinking strengh and weakness.

### 2. Analysis of HOTS element based on Bloom Taxonomy

Table 1. Analysis of HOTS Element Based on Bloom Taxonomy

H O T S	Analyzin g	Verbs: elaborate ,check,compare,criticize,test
	Evaluati ng	- Verb: evaluate,asses,refute,decide,choose,support,suspect,predi ct,identify - Specify aspect/element
	Creating	- Creating your own ideas

		- Verb : constructing, design, creation, developing, writing, combining, formulating - Make decisions about quality of information
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The contributors got here out with a overall of sixty nine HOTS sentences in their Pre-test a look at while of their post test, the individuals had shown a high quality development as they had been capable of write 207 HOTS sentences altogether. those sentences has been analyzed and categorized based on Bloom's Taxonomy level of Higher Order questioning capabilities are :

a. Analyzing

The first stage of HOTS is studying level. In his level, the individuals do have the ability to interpret, discover, evaluate, or to provide an explanation for the results of a situation. for instance, one of the participants was able to give an explanation for the outcome of an motion, where he wrote The naughty boys should not be playing firecrackers in their house because there are a lot of flammable objects in the house. One boy accidentally threw the firecracker to a curtain which precipitated the fire.

b. Evaluating

The second level has much less quantity of sentences as compared to the other two decrease stages because the membera areexoected so as tpo judge or examine a state of affairs. Maximum of the contributors had been able to express their ideas orally however when it comes to writing, they were challenged due to limited vocabulary to limited vocabulary. however, amongst those 27 sentences categorized in this stage, one player has laid his idea superbly by pointing out and justifying on his disagreement about the scenario. He wrote down the naughty boy must not be playing firecrackers inside their house due the fact there are a number of flammable items within the house. According to the sentences, it is far really shown that the player has stated his disapproval on the act that triggerredd the fireplace.

c. Creating

In this stage,the participants are required to expand or build a new ideain their essay. as an example, the image stimulus displayed simplest the fireman placing down the fireplace the usage of water. But, one of the participant managed to portray the state of affairs took place earlier than the arrival of the fireman, and list down the alternative to placed down the fire in his sentence. \_The villagers had been busy placing down the hearth by the use of a sack of sand and buckets of water.

### 3. Implementing HOTS Through Some Strategies

There are a few ways that can be implemented with the aid of the teachers in the study room to enhance students' English efficient abilities English efficient abilities whilst integrating their better-order wondering abilities.

a. Questioning

According to Baston(1981);Mc Kenzie(1972); Taba(1966) as stated in Singh et al.,(2018) were demonstrated that better cognitive strategies can be led via higher stage query. The open-ended question stimulates the use of student's higher order thinking skills. Setyarini et al., (2018) describe that open ended students require the students to suppose severely by giving their opinion, comment and motivates. Whislist the students ask a query about the material that trainer provide, it approach that college students create connection between their previous idea and the new idea that they get which provide them higher comprehension of a idea. The greater facts hey are going to get which also increase their writing potential regarding many thoughts they own

b. Inference

Every other approach that can be used by means of the teachers is guiding the studens to infer the knowledge to the real hassle. The teachers can carry a cutting-edge or trending problem to the magnificence and the students are demanted to write an essay concering problem solving based totally on the issue given with the aid of the teachers. In this level, the collage students are educated to observe their know how in a ctual conditions. Primarily based on Johnson and Thomas (1992) report, one of the succesful getting to know techniques is helping the college students to classify their knowledge the use of visible media and resource maps which can visually eximplify the students concept and the connection between it (Singh et al.,2018)

The research found several sources which have executed the HOTS strategy in teaching students from Article by Maria Agustina Reforma Putri students from excessive college Magelang Mathematic Education Study Application,Department Of Education Arithmetic And Natural Sciences,Teaching And Science College Training, Sanata Dharma University 2019/2020. This research additionally aimed to explain the Higher Order Thinking skills for grade 7<sup>th</sup> of class A in Tarakanita Junior High Faculty Magelang after applying PBL Learning versiom based totally onm ethnomathematics. The studies used descriptive method with a qualitative method with a qualitative method. The studies used descriptive method with a qualitative method.

The research effects confirmed that (1) the gaining knowledge of technique the usage of PBL based totally on ethonamthetics with the quadrilateral topic is performed by way of guilding students to form their information of quadrilateral thru contextual issues accociated with the magelang water tower, (2) higher order thinking abilities of students grade 7<sup>th</sup> of class A in Tarakanita Junior High School Magelang can be defined as follows :

- (a) Students ability to investigate is good. There is an boom inside the number of college students who are able to reach the stage of differentiating and connecting.
- (b) The capability of college students to evaluate fairly properly. On the other5 hand, it nevertheless requires help from the instructor.

- (c) The ability of students to create nonetheless needs to be further evolved primarily based at the effects of the work on the questioness the potential to plan and additionally produce more assistance is needed due to the fact there's best one scholar who is able to answer the question effective

## METHODOLOGY

### Method of the Research

This studies is a quantitative research design. It's miles an experimental studies design. In line with Ary (2009:22), quantitative studies uses objective size to accumulate numeric information that are used to replay questions or take a look at pretend determined hyphotheses. Which consist of pre-test and put up-take a look at so as to realize the enhancing of pupil's writing potential based on HOTS question. This research is an experimental studies which experimental carried out to the populace or the sample. In the experiment.

Table 2. Design of the Research( Cohen,2007 : 283 )

Eksperimental	$O_1$	X	$O_2$
Kontrol	$O_3$		$O_4$

Note:

$O_1$  = The mean pretest score of the experimental group

$O_2$  = Mean posttest score of the experimental group

X = Treatment (treatment) the application of fliiped classroom

$O_3$  = Mean pretest score of control group

$O_4$  = Mean posttest score of control group

The dotted line indicates how the selection between the manipulate organization and the experimental organization became not finished randomly ( Morrison, 2007: 283).

### Population And Sample

#### Population

In line with Ary (2009 : 148), populace is described as all contributors of any well described class of people ,or gadgets. Populace is like wise the institution of the human beings which you need to find out about by doing all of your studies. On this research,the researcher will take students in SMA Negerin 3 Pematangsiantar. There are two are two lessons of this grade. The instructions encompass 33 college students. Overall of populace is 66 college students. In this studies both populace and pattern is same ,because overall class of Ten grade is instructions. To take the pattern, the researcher makes use of purposive sampling method as all of the individuals had been studying on the school where in the researcher become working .

So the researcher took two lessons to be researched where in experimental group includes 33 students (X IPS 1),and manipulate organization

consist of 33 college students (X IPA 7) and the sums of the scholars are 66 college students. As the studies attempts to discover the enchanching of college students writing capability based totally on HOTS questions at eighth grade in SMA Negeri 3 Pematangsiantar ,this research applied pre and publish check to examine students production production of HOTS sentences earlier than and after drillings on writing through the questions.

Table 3. Population

No	CLASS	Number Of Students
1	X IPA 7	33
2	X IPS 1	33
	Total	66

### Sample

In line with Sugiyono (2016 :80), a sample is part of the variety and traits possessed through a population. Pattern size is achieved thru data. Purposive sampling is used by reseaechers due to the fact it is suitable for use in quantitative research. The two businesses are selected through the researcher. Class X IPA 7 is the experimental class, and X IPS 1 is the control class. The researcher X IPA 7 and X IPS 1 are selected.

Table 4. Sample

Class	Number of Students
X IPA 7 (Experimental Class)	33
X IPS 1 (Control Class)	33
Total	66

### Variabel

The usage of experimental research to demonstrate the connection among an unbiased and a based variable (2012). The unbiased variable and the established variable are both tested by the researcher. The dependent variable became authoring descriptive textual content, and the independent variable changed into HOTS (Higher Order Thingking Skills) Strategy.

### Instrument of the Research

Instruments are designed to acquire the statistics. The instrument uses on this research is HOTS question. This take a look at approach the scholars write descriptive text primarily based on HOTS questions. The researcher makes use of writing test within the put up-take a look at to both organizations with the same object however the experimental institution makes use of HOTS query while the control group without HOTS questions. During the pre-test consultation, students have asked to write down an essay based totally on HOTS questions. No discussion or streerage turned into given during the consultation weeks of remedy consultation take vicinity proper after the pre- take a look at in which the HOTS questions have been utilized and this changed into executed inside the afternoon so that the studies has no longer disturb their actual English lesson. The students in this study take a written or essay test from the researcher.

Pre-test and post-test are the 2 specific sorts of exams. both exams included descriptive texts that measured college students' grade-level proficiency as well as core and essential abilities. Every test has a wonderful topic so that it will prevent college students from recalling the prior subject matter.

They are requested to give an explanation for "My school" to the experimental organization and "My school" to the control group for the examine.

The cause of this test is to decide how effectively students can contain their thoughts for the sentences "My school" and "My school" into written textual content. The researcher will best train approximately definition, motive, well-known structure, language functions, and an example of descriptive text to the experimental magnificence, while the control class will receive no treatment, once they have determined how a ways the teaching method has advanced the writing potential. After the therapy is whole, the researcher offers the scholars a post-test by means of giving them commands on the way to create a descriptive text with the subject matter of "My school"

The intention of this study is to decide how well college students can write descriptive textual content with implementing HOTS (higher Order thinking skills) Questioning. The open-ended question stimulates the usage of student's better order questioning skills. Setyarini et al., (2018) describe that open ended students require the students to think severely through giving their opinion, comment and motivates. Whislist the students ask a query approximately the cloth that instructor offer, it approach that college college students create connection between their preceding concept and the new idea that they get which offer them higher comprehension of a concept.

The more facts whats up are going to get which additionally boom their writing capability regarding many thoughts they personal The rubric use in this research is according to Jacobs et al. (1981: 31). Jacobs, et al. (1981) further prominent among five factors: content is given 30 factors, language use is given 25 factors, enterprise and vocabulary are given 20 points, and mechanics is given five factors. Writing skills Scoring Rubric with the aid of Jacob et al.

Table 5. Scoring Rubric for Writing Skills by Jacobs et al

Components	Criteria	Score
C O N T E N T	EXCELLENT TO VERY GOOD: knowledgeable, substantive, thorough development of thesis, relevant to assigned topic. GOOD TO AVERAGE: some knowledge of the subject, adequate range, limited development of thesis lacks of detail, mostly relevant the topic. FAIR TO POOR: limited knowledge, little substances, in adequate development of thesis. VERY POOR: does not show knowledge of subject, non-substantive, not pertinent.	30 - 27 26 - 22 21 - 18 16 - 13

Organizational	EXCELLENT TO VERY GOOD: fluent expression, ideas clearly stated/ supported, succinct, well organized, logical sequencing, cohesive.	20 - 18
	GOOD TO AVERAGE: somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing.	17 - 14
	FAIR TO POOR: non-fluent, ideas confused or disconnected lacks of logical sequencing and development.	13 - 10
	VERY POOR: does not communicate, no organization, or not enough to evaluate	9 - 7
Vocabulary	EXCELLENT TO VERY GOOD: sophisticated range, effective word/ idiom choice and usage, word form mastery, appropriate register.	20-18
	GOOD TO AVERAGE: adequate range, occasional errors of word/ idiom form, choice, usage but meaning not obscured.	17-14
	FAIR TO POOR: limited range, frequent errors of word/ idiom form, choice, usage, meaning confused or obscured	13-10
	VERY POOR: essentially translation, little knowledge of English vocabulary, idioms, word form, or not enough to evaluate.	9-7
Grammar	EXCELLENT TO VERY GOOD: effective complex construction, few errors agreement, tense, number, word order/ function, articles, pronouns, preposition.	25-22
	GOOD TO AVERAGE: effective but simple construction, minor problems in complex construction, several errors of agreement, tense, number, word order/ function, articles, pronouns, prepositions but meaning seldom obscured.	21-18
	FAIR TO POOR: major problems in simple/complex construction, frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions, meaning confused or obscured.	17-11
	VERY POOR: virtually no mastery of sentence construction rules, dominated by errors, does not communicate, OR not enough to evaluate	10-5
Mechanic	EXCELLENT TO VERY GOOD: demonstrates mastery of conventions, few errors of spelling, punctuation, capitalization, paragraphing.	5
	GOOD TO AVERAGE: occasional errors of spelling, punctuation, paragraphing but meaning not obscured	4

**Procedure of Collecting Data**

Tool is a tool or manner used for gathering the records. To get the information of this research, Test has used. The take a look at is to answer the questions by way of essay check. students are asked to answer the questions based at the paper and this test has the tool. The technique in taking the information of research, the researcher does following steps, as follows:

1. Test

Take a look at is a systematic behavior and describing it with the useful resource of a numerical scale of category gadget. take a look at is used to degree whether or not there may be or no and the way big the ability of the object of research (college students). The check become taken twice, pre-test and submit-test. Pre-test become taken earlier than making use of the remedy and post-test changed into taken after applying the remedy

2. Pre-test

The pre-check is behavior to find out the students' score before treatment. The take a look at became writing check. The Researcher gave several subjects to be selected by way of college students. Then the researcher asked the scholars to write down descriptive text that the text. The function of pre-take a look at is to understand the scores of the students in writing talent

3. Remedy

The treatment is conduct after the pre-take a look at. There have been businesses conducted in this studies, the experimental institution taught by using the use of HOTS questions and the manage institution taught with out using HOTS query four. submit-test The publish- take a look at changed into performed after the scholars obtained the treatment. The goal of this test is to find out the students' rating after remedies that turned into improves from pre-take a look at to put up-test. The topics gave same because the pre-test subjects.

4. Post-test

The post- take a look at changed into performed after the scholars received the treatment. The goal of this take a look at is to discover the scholars' score after remedies that was improves from pre-take a look at to submit-take a look at. The topics gave equal as the pre-test topics

### Technique of Data Analysis

After the researcher gather the facts, then the researcher analyze the facts by way of the following:

1. Finding mean score of each group

The researcher calculates the mean (M) of variable X (experimental group) and Y (control group) by using the following formula :

$$\begin{array}{l} \bar{x} \quad = \text{The average score} \\ \sum fx \quad = \text{Sum of the raw score} \\ N \quad = \text{Number of Students} \end{array} \quad \bar{X} = \frac{\sum fx}{N}$$

(Hatch & Farhady, 1982: 59)

2. Finding standard deviation of each group

Standard deviation is a number used to tell how measurements for a group are spread Out from the average (mean), or expected value:

$$s^e = \sqrt{\frac{\sum d^2}{N - 1}}$$

<p><math>s^e</math> = Standart deviation  <math>\sum d^2</math> = Sum of mean deviation  <math>N</math> = Number of students  <math>1</math> = Constant number</p>
--

(Hatch Farhady,1982: 59)

### 3. Testing Hypothesis

Counting t-test to know how far the students' writing ability based on the application of HOTS questions. The t-test formula can be count as follow:

$$SE (\chi e - \chi c) = \sqrt{\left(\frac{se^2}{\sqrt{N1}}\right) + \left(\frac{sc^2}{\sqrt{N2}}\right)}$$

SE (xe - xc)	= Standart
s	= Standart deviation of
sc	= Standart deviation of
N1	= Number of students of
N2	= Number of students of

(Hatch & Farhady, 1982: 59)

$$t_{test} = \frac{\bar{\chi} e - \bar{\chi} c}{SE (\chi e - \chi c)}$$

$\bar{\chi} e$	= Mean of post test in
$\bar{\chi} c$	= Mean of post test in
SE (xe - xc)	= Standart

(Hatch & Farhady, 1982: 59)

### The Validity and Reliability of the Test

Test validation consists of the establishment of validity and reliability. This two factors should be fulfilled a test before it is used to device the data in research.

#### 1. The Validity of Test

In this example, the content of the take a look at was adapted from standard shape of descriptive textual content based on Mukarto (2007) indicates the factors of descriptive textual content, they may be identify phenomenon identity including character, vicinity, aspect. some other one (description) together with component, satisfactory, and characteristic. The content validity of the checks used in this studies may be seen as the comply with:

Table 6. The Validity of Test

Content	Competence indicators	Test items	Kind of test	Score
Identification	Identify people	3	Essay	15
	Identify animals	2	Essay	10
	Identify place	2	Essay	15
Description	Parts	3	Essay	20
	Qualities	2	Essay	20
	Characteristic	3	Essay	20
Total		15		100

### Reliability of the Test

Reliability defines as essential function of any proper take a look at: to be valid in any respect, a test ought to first dependable as a measuring tool. Reliability refers to the consistency of the scores acquired and the way steady.

## RESEARCH RESULT

### Data Analysis

The researcher gave the students a pre-test earlier than having them write descriptive textual content. Following that, it went directly to the second meeting, when learning changed into done as Higher Order Thinking skill changed into used to explain the difficulty. It became at this assembly that the researcher carried out a check for the students, referred to as the post-test. The pre-test value facts and the post-test records make up every half of of the experimental class information. The statistics from the experimental elegance's pre-check and post-test consequences are shown in table four 1 and are described as follows:

Table 7. The Score of Pre- Test of Experimental Class

NO	NAME	SCORE					PRE-TEST
		Content	Organization	Vocabulary	Grammar	Mechanic	
1.	Aditia Pohan	20	15	10	10	3	58
2.	Angga Mungkur	25	15	20	20	4	84
3.	Andreas Pardede	20	15	10	10	4	59
4.	Aprido Sitorus	5	5	5	10	2	27
5.	Budi Damanik	5	5	5	10	2	27
6.	Cendy Simanjuntak	20	20	15	20	4	79
7.	Denro Saragih	15	15	15	20	4	69
8.	Desmawan Aruan	5	5	5	10	2	27
9.	Dimas Aksal Prawira	5	4	5	10	2	26
10.	Dinda Hulu	20	20	15	25	4	84
11.	Diva Tampubolon	15	15	15	20	4	69
12.	Donna Simanjuntak	5	5	8	8	2	28

13.	Eliza Simanjuntak	15	7	10	15	2	49
14.	Farel Sinaga	8	10	10	10	2	40
15.	Fathur Ghazali	15	15	15	25	4	74
16.	Force Rajagukguk	20	20	15	27	4	86
17.	Gilberto Simanjuntak	5	8	5	10	2	30
18.	Gita Yunizah	15	10	10	10	2	47
19.	Jelita Ambarita	15	15	10	10	2	52
20.	Kevin Tambunan	10	5	5	10	2	32
21.	Lilian Sitindaon	20	15	15	20	3	73
22.	Melani Hasibuan	10	10	10	20	3	53
23.	Muhammad Allawi	10	10	15	10	2	47
24.	Naysia Siahaan	5	8	9	10	2	34
25.	Ningsih Agatha	15	10	10	20	3	58
26.	Nofson Simangunsong	3	5	4	10	1	23
27.	Rasya Pasha	7	5	4	10	1	27
28.	Reyvan Opusunggu	10	10	10	15	3	48
29.	Salsabila Try anggia	10	10	5	20	3	48
30.	Satria Sinurat	5	5	10	10	3	33
31.	Sofia Zazuri	10	15	10	20	3	58
32.	Tasya Engelina	15	10	10	20	3	48
33	Yeskiel Sitorus	15	15	12	20	3	65
	Σ						1656
	Mean						50,18

Based on table 4.1 the pre-test and post-test scores show that, the experimental class has 33 class students registered. Pre-test data for the experimental class revealed that the highest score was 86 and the lowest was 26. Four students got the KKM score and the rest didn't reach the KKM score. The experimental included 1656 pre-test with a mean score of 50,18

**Mean of pre – test**

$$\bar{X} = \frac{\sum fx}{N}$$

$$\bar{x} = \frac{1656}{33}$$

$$33$$

$$\bar{x} = 50,18$$

Table 8. The Score of Post- Test of Experimental Class

NO	NAME	SCORE					PRE-TEST
		Content	Organization	Vocabulary	Grammar	Mechanic	
1.	Aditia Pohan	25	18	15	12	5	75
2.	Angga Mungkur	25	15	20	25	5	90
3.	Andreas Pardede	20	15	15	20	5	75
4.	Aprido Sitorus	10	15	15	15	4	59
5.	Budi Damanik	18	15	15	15	4	67
6.	Cendy Simanjuntak	20	20	20	20	5	85
7.	Denro Saragih	15	15	20	20	5	75
8.	Desmawan Aruan	15	15	20	20	5	75
9.	Dimas Aksal Prawira	15	15	20	20	5	75
10.	Dinda Hulu	20	20	15	25	4	84
11.	Diva Tampubolon	15	15	25	20	5	80
12.	Donna Simanjuntak	15	20	19	19	3	76
13.	Eliza Simanjuntak	15	15	20	25	5	80
14.	Farel Sinaga	15	15	20	20	5	75
15.	Fathur Ghazali	15	15	15	29	5	79
16.	Force Rajagukguk	20	20	15	27	4	86
17.	Gilberto Simanjuntak	15	15	20	20	5	75
18.	Gita Yunizah	15	15	20	20	5	75
19.	Jelita Ambarita	15	15	20	20	5	75
20.	Kevin Tambunan	15	15	20	20	5	75
21.	Lilian Sitindaon	27	15	15	20	3	80
22.	Melani Hasibuan	19	15	20	20	5	79
23.	Muhammad Allawi	10	20	25	15	5	75
24.	Naysia Siahaan	15	15	20	20	5	75
25.	Ningsih Agatha	15	20	15	20	5	75
26.	Nofson Simangunsong	15	15	20	20	5	75
27.	Rasya Pasha	15	15	20	20	5	75

28.	Reyvan Opusunggu	10	20	20	25	5	80
29.	Salsabila Try anggia	15	15	15	25	5	78
30.	Satria Sinurat	15	18	25	15	5	78
31.	Sofia Zazuri	18	19	15	20	5	77
32.	Tasya Engelina	15	15	20	20	5	75
33	Yeskiel Sitorus	15	15	20	20	5	75
	Σ						2533
	Mean						76,75

Based on table 4.2 the post-test and post-test scores show that, the experimental class has 33 class students registered. Post-test data for the experimental class revealed that the highest score was 90 and the lowest was 59. thirty students got the KKM score and the two students reach the KKM score. The experimental included 2533 post-test with a mean score of 76,75

#### Mean of pre - test

$$\bar{X} = \frac{\sum fx}{N}$$

$$\bar{x} = \frac{2533}{33}$$

$$= 76,75$$

$$\bar{x} = 76,75$$

Table 9. The Score of Pre- Test of Control Class

NO	NAME	SCORE					PRE-TEST
		Content	Organization	Vocabulary	Grammar	Mechanic	
1.	Abdullah Muhammad	16	17	15	10	2	60
2.	Aldi Nanjaya Saputra	10	15	10	15	2	52
3.	Andre Pasyah	10	15	15	10	2	52
4.	Angelica Simanjuntak	10	15	15	15	2	57
5.	Ariwansyah Sijabat	15	8	10	10	2	45
6.	Chika Siahaan	25	10	10	10	3	58
7.	Debby Siregar	15	15	20	10	3	63

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8.	Deswinda Situmorang	15	15	10	10	2	52
9.	Dwi Pratiwi	15	15	10	10	2	52
10.	Elsania Siahaan	10	10	15	15	2	52
11.	Gensa Asih Hasibuan	15	15	15	10	2	57
12.	Gisella Artasya	15	10	10	10	2	47
13.	Gitsy Sibuea	15	15	10	15	2	57
14.	Gusdiva Andani	15	15	10	10	2	52
15.	Intan Pratiwi	15	15	15	10	2	57
16.	Isabella Sinaga	10	10	15	15	2	52
17.	Jhinsitian Sinaga	15	15	10	10	2	52
18.	Krissy Sipayung	15	15	10	10	2	52
19.	Margaret Simaremare	15	15	10	10	2	52
20.	Muhammad Dwi H	15	15	10	10	2	52
21.	Nilza Nasution	15	15	15	10	2	57
22.	Nopita Saragih	10	15	10	10	2	47
23.	Noval Malau	10	10	10	10	2	42
24.	Olivia Damanik	15	15	10	15	3	58
25.	Pay Zinggi Sibarani	15	15	15	15	3	63
26.	Resy Siahaan	15	15	10	10	2	52
27.	Reyhan Tampubolon	10	15	10	10	2	47
28.	Rizka Purba	10	10	10	15	2	47
29.	Ryan Saragih	15	15	15	10	2	57
30.	Salsa Pangaribuan	15	10	10	15	2	52
31.	Sindy Sihombing	10	10	10	10	2	42
32.	Sinta Sibarani	15	15	10	10	2	52
33	Tia Sipahutar	15	15	10	10	2	52
	$\Sigma$						1741
	Mean						52,75

Based on table 4.3 the pre-test show that, the experimental class has 33 class students registered. Pre-test data for the experimental class revealed that the highest score was 63 and the lowest was 42. nothing students got the KKM score. The experimental included 1656 pre-test with a mean score of 50,18

**Mean of pre - test**

$$\bar{X} = \frac{\sum fx}{N}$$

$$\bar{x} = \frac{1656}{33}$$

$$33$$

$$\bar{x} = 52,75$$

Table 10. The Score of Post- Test of Control Class

NO	NAME	SCORE					POST - TEST
		Content	Organizatio n	Vocabular y	Gramma r	Mechanic	
1.	Abdullah Muhammad	19	18	20	20	4	81
2.	Aldi Nanjaya Saputra	18	19	20	19	4	80
3.	Andre Pasyah	18	19	20	19	4	80
4.	Angelica Simanjuntak	20	20	20	20	4	84
5.	Ariwansyah Sijabat	19	18	19	19	4	79
6.	Chika Siahaan	25	20	20	20	5	90
7.	Debby Siregar	20	25	20	24	5	94
8.	Deswinda Situmorang	20	20	20	20	5	85
9.	Dwi Pratiwi	20	20	20	20	4	84
10.	Elsania Siahaan	19	20	20	19	4	82
11.	Gensa Asih Hasibuan	15	19	19	15	4	72
12.	Gisella Artasya	20	20	19	16	4	79
13.	Gitsy Sibuea	20	20	19	17	4	80
14.	Gusdiva Andani	20	20	20	17	4	81
15.	Intan Pratiwi	20	20	20	15	4	79
16.	Isabella Sinaga	19	20	20	15	4	78
17.	Jhinsitian Sinaga	19	20	18	15	4	76

18.	Krissy Sipayung	20	20	19	15	4	78
19.	Margaret Simaremare	20	20	20	15	4	79
20.	Muhammad Dwi H	20	20	19	15	4	78
21.	Nilza Nasution	20	20	19	15	4	78
22.	Nopita Saragih	19	20	19	15	4	77
23.	Noval Malau	20	20	18	15	4	77
24.	Olivia Damanik	20	25	20	20	5	90
25.	Pay Zinggi Sibarani	20	25	20	20	5	90
26.	Resy Siahaan	20	20	19	15	4	78
27.	Reyhan Tampubolon	19	20	20	15	4	78
28.	Rizka Purba	20	20	20	15	4	79
29.	Ryan Saragih	20	20	19	15	4	78
30.	Salsa Pangaribuan	20	20	20	15	4	79
31.	Sindy Sihombing	19	20	20	15	4	78
32.	Sinta Sibarani	20	19	19	15	4	78
33	Tia Sipahutar	20	20	19	15	4	78
	Σ						2657
	Mean						80,51

Based on table 4.4 the post-test scores show that, the Control class has 33 class students registered. Post-test data for the control class revealed that the highest score was 94 and the lowest was 72. 32 students got the KKM score. The control class included 2657 post-test with a mean score of 80,51

**Mean of pre - test**

$$\bar{X} = \frac{\sum fx}{N}$$

$$\bar{x} = \frac{2657}{33}$$

$$33$$

$$\bar{x} = 80,51$$

Table 11. Standard Deviation Score of Experimental Class

NO	X	X	(x - X)	(x - X) <sup>2</sup>
1.	75	76,75	- 1,75	3,0625
2.	90	76,75	13,25	175,5625
3.	75	76,75	- 1,75	3,0625
4.	59	76,75	- 17,75	315,0625
5.	67	76,75	- 9,75	95,0625
6.	85	76,75	8,25	68,0625
7.	75	76,75	- 1,75	3,0625
8.	75	76,75	- 1,75	3,0625
9.	75	76,75	- 1,75	3,0625
10.	84	76,75	7,25	52,5625
11.	80	76,75	3, 25	10.5625
12.	76	76,75	- 0, 75	0,5625
13.	80	76,75	3, 25	10.5625
14.	75	76,75	- 1,75	3,0625
15.	79	76,75	2,25	5,0625
16.	86	76,75	9,25	85,5625
17.	75	76,75	- 1,75	3,0625
18.	75	76,75	- 1,75	3,0625
19.	75	76,75	- 1,75	3,0625
20.	75	76,75	- 1,75	3,0625
21.	80	76,75	3, 25	10.5625
22.	79	76,75	2, 25	5,0625
23.	75	76,75	- 1,75	3,0625
24.	75	76,75	- 1,75	3,0625
25.	75	76,75	- 1,75	3,0625
26.	75	76,75	- 1,75	3,0625
27.	75	76,75	- 1,75	3,0625
28.	80	76,75	3, 25	10.5625
29.	78	76,75	1,25	1,5625
30.	78	76,75	1,25	1,5625
31.	77	76,75	0,75	0,5625
32.	75	76,75	- 1,75	3,0625
33.	75	76,75	- 1,75	3,0625
		$\sum(x-X)^2=\sum d^2$		889,4375

From the data in Table 4.6, as can be observed, the experimental class's total square post-test time is 889,4375. To calculate the post-test standard deviation for the experimental class and compare it to the post-test data from the control class, these data points are required.

The post-test standard deviation for the control class is as follows:

$$Sc = \frac{\sqrt{\sum d^2}}{N-1}$$

$$Sc = \frac{\sqrt{889,4375}}{33-1}$$

$$Sc = 5, 27$$

Table 12. Standard Deviation Score of Experimental Class

NO	X	X	(x - X)	(x - X) <sup>2</sup>
1.	81	80,51	0,49	0,2401
2.	80	80,51	- 0,51	0,2601
3.	80	80,51	- 0,51	0,2601
4.	84	80,51	3,49	12,1801
5.	79	80,51	- 1,51	2,2801
6.	90	80,51	9,49	90,0601
7.	94	80,51	13,49	181,9801
8.	85	80,51	4,49	20,1601
9.	84	80,51	3,49	12,1801
10.	82	80,51	1,49	2,2201
11.	72	80,51	- 8,51	72,4201
12.	79	80,51	- 1,51	2,2801
13.	80	80,51	- 0,51	0,2601
14.	81	80,51	0,49	0,2401
15.	79	80,51	- 1,51	2,2801
16.	78	80,51	- 2,51	6,3001
17.	76	80,51	- 4,51	20,3401
18.	78	80,51	- 2,51	6,3001
19.	79	80,51	- 1,51	2,2801
20.	78	80,51	- 2,51	6,3001
21.	78	80,51	- 2,51	6,3001
22.	77	80,51	- 3,51	12,3201
23.	77	80,51	- 3,51	12,3201
24.	90	80,51	9,49	90,0601
25.	90	80,51	9,49	90,0601
26.	78	80,51	- 2,51	6,3001
27.	78	80,51	- 2,51	6,3001

28.	79	80,51	- 1,51	2,2801
29.	78	80,51	- 2,51	6,3001
30.	79	80,51	- 1,51	2,2801
31.	78	80,51	- 2,51	6,3001
32.	78	80,51	- 2,51	6,3001
33.	78	80,51	- 2,51	6,3001
		$\sum(x-X)^2=\sum d^2$		694,2433

From the data in Table 4.6, as can be observed, the control class's total square post-test time is 694,2433. To calculate the post-test standard deviation for the control class and compare it to the post-test data from the control class, these data points are required.

The post-test standard deviation for the control class is as follows:

$$S_c = \frac{\sqrt{\sum d^2}}{N-1}$$

$$S_c = \frac{\sqrt{694,2433}}{33-1}$$

$$S_c = 4,65$$

### Testing Hypothesis

To testing hypothesis in this research, the researcher calculated the standard error and t-test. To calculated the standard error using standard deviation in experiment and control, and using number students of experiment and control, the formula as follow.

Standard Error of the Difference of Mean:

$$SE (x_e - x_c) = \sqrt{\left(\frac{se}{\sqrt{N1}}\right)^2 + \left(\frac{sc}{\sqrt{N2}}\right)^2}$$

$$SE (x_e - x_c) = \sqrt{\left(\frac{4,65}{\sqrt{33}}\right)^2 + \left(\frac{5,27}{\sqrt{33}}\right)^2}$$

$$SE (x_e - x_c) = \sqrt{\left(\frac{21,62}{\sqrt{33}}\right)^2 + \left(\frac{27,77}{\sqrt{33}}\right)^2}$$

$$SE (x_e - x_c) = \sqrt{\left(\frac{49,39}{5,7}\right)}$$

$$SE (x_e - x_c) = \sqrt{8,66}$$

$$SE (x_e - x_c) = 2,94$$

From the calculated by using the formula standard error is 2,94. After find standard error is to find out the t-test by using formula the average in experiment minus the average score in control divided standard error, the formula as follow.

Finding out t-test:

$$t_{test} = \frac{\bar{x}_e - x_c}{SE(x_e - x_c)}$$

$$t_{test} = \frac{76,75 - 80,51}{2,94}$$

$$t_{test} = \frac{-3,76}{2,94}$$

$$t_{test} = 1,27$$

Finding out the degree of freedom (df) as follow:

$$\begin{aligned} df &: (N_e - 1) + (N_c - 1) \\ &: (33 - 1) + (33 - 1) \\ &: 64 \end{aligned}$$

Based on the results of data analysis, it is known that there is a significant effect of using the Higher Order Thinking School Questions on the writing of Ten grade students at SMA 3 Pematang siantar in writing descriptive texts, differences or overall improvement of students can be seen from the average value of the pre-test and post-test.

1. The mean score in experimental class from pre-test 50,18
2. The mean score in experimental class from post-test 76,75
3. The mean score in Control Class From pre- test 52,75
4. The mean score in Control Class From post- test 80,51
5. The improvement in the range value obtained in the control class is 27,76
6. The improvement in the range value obtained in the Experimental class is 889,4375
7. The number of squares of respondents in the post-test experimental class was 1645,467 .
8. The number of squares of respondents in the post-test control class is 694,2433.
9. The standard deviation of the post-test experimental class was 4,6.
10. The standard deviation of the post-test control class was 5,2.
11. Standard error in experimental and control class 2,94
12. The degree of freedom (df) is 64 and the t-table at a level of a significant 5% for a two-tailed test is 1,27.

13. Testing hypothesis showed that the t-test (1,27) is higher than the t-table(1,25) at a 5% of level significance. ( $H_a$ ) is accepted and ( $H_o$ ) is rejected

## DISCUSSION

Based at the paintings of the records analysis on the thesis, there are several discoveries which are sooner or later found via the researcher, those are the subsequent: using HOTS questions can improve the students' capability in writing descriptive text at XI th grade in SMA NEGERI 3 PEMATANGSIANTAR.

1. HOTS questions is vital for a a success study room.
2. HOTS questions permits for the students to emerge as emotionally linked with school and growth motivation.
- 3.HOTS questions create an excellent environment for mastering and motivation.
4. HOTS question can be fun as media to specific their feeling, opinion, and idea on written text.
5. HOTS query can enhance the students' capacity in writing descriptive textual content at 8th grade in SMA Negeri 3 Pematangsiantar.

From all of the analyzed records, it's miles found that there was a sizable development of students' ability in writing descriptive textual content which changed into implemented HOTS question. The t-test shown the cost of t-test at turned into higher than t-determined. It method t-take a look at turned into better than t-table ( $1,27 > 1.25$  ). So based on the score, the null hypothesis turned into rejected and opportunity hypothesis ( $H_a$ ) became common.

## CONCLUSIONS AND RECOMMENDATIONS

Based totally at the facts evaluation and findings above, it became located that there was an improvement of college students' potential in writing descriptive texts by the use of HOTS questions. at the first time, the scholars had been indolent to write, and they did now not need to explicit their thoughts. based totally on the end result of the statistics evaluation offered in bankruptcy IV, the researchers concluded that with the aid of the use of the media of HOTS questions, the scholars are being helped to come back towards them and discover ways to consider their thoughts of feelings. The result of t-test has proved the full-size means of experimental than control group. The end result of t-test 1,27 while t-table.1,25 at  $df = 64, (N_x + n_y - 2)$  and the degree full-size = zero.05, it's miles concluded that the usage of HOTS questions enhance substantially the college students' writing descriptive textual content at 10th grade in SMA Negeri 3 Pematangsiantar.

## ADVANCED RESEARCH

In writing this article the researcher realizes that there are still many shortcomings in terms of language, writing, and form of presentation considering the limited knowledge and abilities of the researchers themselves. Therefore, for the perfection of the article, the researcher expects constructive criticism and suggestions from various parties.

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