A COMPARATIVE STUDY OF STUDENTS’ ACHIEVEMENT IN ENGLISH BETWEEN GRADUATES OF THE REGULAR JUNIOR HIGH SCHOOL AND THOSE OF THE OPEN JUNIOR HIGH SCHOOL

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2005
APPROVAL

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Dedicated to:
My wife: Sri Sumarti,
My children: -Rusmiyati S,
    -Cahyagama S,
    -Tri Cahyadi S,
My Grandchildren: -Dyah Maghfiroh Aulia
    -Muhammad Naufal Fawwas Aulia,
MOTTO

Allah will raise up those of you who believe
And have been given knowledge
(QS: 58: 11)
ACKNOWLEDGMENT

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Many thanks are devoted to the Principals of the Regular and Open Junior High School in ex-Loano district, Purworejo regency, Central Java, who helped to provide the necessary data.

Many sincere thanks are due to my wife, my daughter, and my son, for their prayers, support, and understanding.

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Finally, needless to say, this piece of writing is far from being perfect. However, I still have the hope that this thesis will be of some contribution to the practice of English learning and teaching at the Junior High School.

Semarang, June 23rd, 2005.
STATEMENT

I certify that this thesis is definitely my own work. I am completely responsible for the content of this thesis. Other writer’s opinions or findings included in this thesis are quoted or cited in accordance with the ethical standards.

Semarang, June 23rd, 2005.

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ABSTRACT

SARJU ALIAS SARJUNINGTYAS, 2005. A Comparative Study of Students’ Achievement in English between Graduates of the Regular Junior High School and those of the Open Junior High School.

Thesis: Postgraduate Program of Semarang State University

Consultant I: A. Maryanto, Ph.D., II: Drs. Soejono, M.A.

Keywords: Students’ Achievement, unrestricted proportional random sampling, level of significance.

The aim of this research is to investigate the comparison of students’ achievement in English between graduates of the Regular Junior High School and those of the Open Junior High School. The null hypothesis to test: “There is not difference of students’ achievement in English between graduates of the regular junior high school and those of the open junior high school”.

The population of this research is all of the third year students of the regular junior high school and the open junior high school during the academic year of 2000/2001-2002/2003 in the ex sub-district of Loano, Purworejo Regency, Central Java. The sample for the regular junior high school was taken by unrestricted proportional random sampling, i.e. 860 among 4295 students’ population; meanwhile the sample for the open junior high school was taken all (180) students by SPS computer program. The instrument used is a document data of the students’ English achievement (NEM) for the academic year of 2000/2001-2002/2003.

The data analyses using ‘t’ test by Excel computer program and SPS proved that for the 2000/2001, 2001/2002, 2002/2003 and 2000/2001-2002/2003 academics years are very significant for the 5% level of significance. This indicates that there is significant difference of students’ achievement in English between graduates of the Regular Junior High school and those of the open Junior High School, in which the students’ English achievement of the Regular Junior High School is higher than those of the Open one.
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A. Background of the Study

Improvement of human life can be achieved through good education; but it is not easy to implement it in a social life. Educational problems in Indonesia as those faced by other developing countries are, among others, inequality of access to education, educational dropouts, and quality of education. Attempts to solve these problems have been conducted, yet the results have not been satisfactory.

As an attempt to increase the quality of human resources, the nine-year compulsory education has been carried out since 1994. It was declared by the President of the Republic of Indonesia on May 2nd, 1994. It consists of primary education for six years and of junior secondary education for three years.

The six – year compulsory education was begun in 1984 (the declaration was on May 2nd, 1984). Since then, primary school age children (7 – 14 years of age) have been accommodated in Primary Schools. They can join Elementary Schools including President Decree Elementary Schools (SD Inpres) and Islamic Primary Schools (Madrasah
Ibtidaiyah). Some of them can also join learning groups of Package A (Kejar Paket A) or accredited examinations of elementary school.

Elementary School and Islamic Primary School are formal institutions of primary education for six years. Elementary Schools are run by the Department of National Education and Islamic Primary Schools are run by the Department of Religion Affairs.

Learning groups of Package A (Kejar Paket A) are the kind of non formal institution run by Department of National Education; while students who study in other institutions such as in a course or self-study can join accredited examination of Elementary School.

According to the Operational Directives of Implementing Counseling and Publication of Compulsory Education of junior high school in Indonesia (Pedoman Operasional Pelaksanaan Penyuluhan dan Publikasi Perintisan Wajib Belajar SLTP di Indonesia = POP4WB SLTP, 1993: 41-53), the graduates of Primary Schools can join the Junior Secondary Education level, such as the following institutions:

1. Regular Junior High School (SMP Reguler)

   Regular Junior High School is formal school conducted by Department of National Education as the continuation of Elementary
School for three years. Regular Junior High School is well known as Junior High School (SMP). It usually has six classes or more.

2. Open Junior High School (SMP Terbuka)

Open Junior High School is a kind of Junior High School established by the government of Indonesia that is for students who cannot join the regular Junior High School because of some reasons (such as the long distance from their houses to a Regular Junior High School).

3. Small Junior High School (SMP Kecil)

Small Junior High School is a kind of Junior High School that has three classes and the sum of its students in each class is less than forty students.

4. Special Junior High School (SMP Luar Biasa)

Special Junior High School is a kind of Junior High School for students who have some handicaps such as blindness, deafness, dumbness, mental handicap and invalid.

5. Special School (SLB)

Special School is a school that provides education for Kindergarten, Elementary, Junior, and Senior High Schools for
students who have a kind of handicap in seeing, hearing, speaking, mental handicap or invalid/losing their organs of the bodies.

6. Integrated Junior High School (SMP Terpadu)

   Integrated Junior High School is a kind of Regular Junior High School that has disabled students with special teachers for them as the guide.

7. Learning Group of Package B (Kejar Paket B)

   “Kejar” can be an acronym and a word. As an acronym, it stands for “kelompok belajar” which is similar to study group; as a word it means “to catch up or compete with respect to achievement”.

   Learning group of package B (Kejar Paket B) is a non-formal institution conducted by Department of National Education that provides education of Junior High School level.

8. Accredited Course (Kursus Persamaan)

   Accredited course of Junior High School is a kind of course that provides education of Junior High School level and gives opportunity its students to join accredited examination.
9. Islamic Junior Secondary School (Madrasah Tsanawiyah)

Islamic Junior Secondary School is a formal institution of Junior Secondary School level conducted by Department of Religion Affairs.

10. Islamic Boarding Schools (Pondok Pesantren)

Islamic Boarding School is a boarding school for Moslems to study Islamic knowledge. Some Islamic Boarding Schools have also carried out the program of Junior Secondary Schools.

This thesis covers the first both kinds of school: Regular and Open Junior High Schools. The requirements of students for both kinds of school are the same, such as certificates of the input and ages; but as for “Kejar Paket B” the requirement of the age is unlimited.

The operation of the Open Junior High School was officially inaugurated by the Minister of Education and Culture at Adiwerna, in Tegal, Central Java, on July 24th 1979. It is aimed at giving as large an opportunity as possible to junior secondary school age children in getting junior secondary education without ignoring its quality. The Open Junior High School supports the government’s policy in educational development (Modul Penataran Kepala SLTP Terbuka MP. 04, 1997: 9).
The use of modular instruction is to solve inequality of access to education and improve its quality.

Basically, the teaching – learning system of the Open Junior High School is different from that of the Regular Junior High School. If we think that the Regular Junior High School provides a good result, can the Open Junior High School also do the same? It is worth questioning because of the learning system (especially in English).

Which system will give a better result? It is necessary to know which English teaching–learning system is more effective than the other one.

**B. Reason for Choosing the Topic**

In conducting a compulsory education, the quantity and the quality of education should be achieved together. The establishment of the Open Junior High School is to expand the opportunity to secondary school age children in getting primary education besides the regular junior high school and other junior secondary schools.

English is an international language by which modern science and technology are transformed, so it has an important role in global communication. In Indonesia, English is considered as the first foreign
language. Thus, it is suggested that students have to have a good command of English in order that they master science and technology and are able to communicate in international society. In fact the English teaching to Indonesian students so far has not shown a satisfactory result. It can be proved by most students' inability to use the language after studying English for three years at a (Junior) High School.

The aims of both educational institutions (the Regular and Open Junior High Schools), especially the aims of the English teaching-learning are the same; but as mentioned above, their systems of teaching-learning are different. If the systems were different, could they gain the same result?

Although the use of modular instruction in the Open Junior High School makes possible improvement of educational quality (Modul Penataran Kepala SLTP Terbuka, MP-4, 1997: 9), some people say that the outcomes of the regular Junior High School are better than those of the Open Junior High School. It’s because of better services of regular school’s teaching – learning system.

The assumption that students’ English teaching-learning achievement of the Regular Junior High School is better than that of the Open Junior High School is not convincing. For as known, there has been
no such research yet. Therefore, this topic for this thesis was chosen. That is the reason why this research was conducted.

C. Problem Formulation

This study covers the Regular Junior High School (SMP Reguler) that is in daily term popularly known as SMP, and the Open one (SMP Terbuka). The systems of teaching – learning in both kinds of school are not equal.

In the Regular Junior High School, like other conventional schools, students learn English (and other lessons) in a regular teaching - learning process (they study in certain class activities, at a certain time, taught by one teacher). This process is very formal. It is a face-to-face teaching - learning process, using compulsory books and other references.

The Open Junior High School uses the same curriculum as the Regular one does, but they have different teaching-learning system. In the Open Junior High School the system of teaching learning is self-learning using modules which consist of books and cassettes. Students learn without getting much assistance of other people. They rarely meet their teachers. They freely study where and when they have time.
At the end of each quarter/semester students of the Open Junior High School are required to have the same tests as those of the Regular Junior High School are. For the third year students, they also have to do the same school and national final examinations. This means that they should achieve the same objectives, including in English. Moreover we must think that studying English themselves by using English modules is a very difficult task for the Open Junior High School students.

So the problems of this thesis are:

- How is the description of the English achievement of students in the Regular Junior High School?
- How is the description of the English achievement of students of the Open Junior High School?
- Is there any difference in English achievement between both institutions?
- Which group performs better in English subject: the students in the Regular School or those in the Open one?

D. Objectives of Study

Self-learning activity using modules as the characteristic of the Open Junior High School is a new method used in English teaching – learning as
foreign language in the Junior High School level, especially in Indonesia. Will it provide better outcomes than those of the other methods?

Based on the difference in teaching – learning systems between both institutions, the objectives of the study are:

- to know English learning achievement of the Regular Junior High School students.

- to know English learning achievement of the Open Junior High School students.

By knowing students’ English learning achievement of both kinds of school system it can be decided which system provides better outcomes. Thus it is easier for the other researcher to investigate the factors that constrain optimal achievement especially in the schools of poorer quality, the kind of school that gets lower achievement.

E. Scope of problem

To gain the above objectives the time of study is really a long term, but this study can use documentary data, so it can last for about three years or less. The due time is June 2003, after the National Final Examination 2003. The location is all the English teaching – learning activities in the Junior High School of ex Loano District, Purworejo Regency. The subjects
of study are the third year students of the Regular as well as the Open Junior High Schools in the ex district.

**F. Significance**

Knowing the comparison of students’ English learning achievement of the Regular and the Open Junior High School is very important. If the students’ English learning achievement of the open schools is better, its system of teaching learning may be adopted – with a proper adaptation – by the regular schools, and vise versa. The authorities can decide good systems that can be used in other kinds of schools. This is as an attempt to improve the quality of education.

Besides that if the achievement of the open schools is the same as or even better than that of the regular schools, it also means a good chance for the elementary school age children who live far from the regular schools if there is a place of learning center (“Tempat Kegiatan Belajar”) of the Open Junior High School in their milieu/environment. They are better to join the open schools.

This is as an effort to enlarge the opportunity or quantity of education.
Theoretically this study is expected to enrich theories of learning especially in English. It will improve teachers’ profession and students’ motivation to gain good teaching learning achievement.

Empirically, the outcomes of this study will hopefully motivate other researchers to conduct further investigation or to use it as a reference.
A. Theoretical Description

1. System Theory

System theory will be taken as the basic concept to highlight the English teaching-learning achievement for both the Regular Junior High School and the Open one.

Silvern LC (1965: 1) states that “System is the structure or organization of an orderly whole, clearly showing the interrelation of the parts to each other and to the whole itself”.

System approach considers that phenomenon have its components which vary and make interaction with each others. School organization can be seen as a system which expresses its own character that is as an in-put absorbers, processors and out-put generators.

Meanwhile, in school organization there are many sub systems of which organization is a part of a whole system. The lay-out of system thinking shows that every change in the sub-system results the changing in the other sub-systems and a sub system will always correlate with the whole system.
Based on the system theory, Johnson et.al. (1973) states that as the results of learning - teaching process, the quality of education can be improved by activating all the components of the educational system. The components cover all messages, men, material, aids or media, technique and environment.

Pusat TK PK in Soejono (1982: 59) states that the components of the Open Junior School are: students, school staff, curriculum, educational facilities and educational cost.

System theory says that the English learning achievement of both students who learn in the Regular Junior High School and the Open one is influenced by the in-put and the process of the educational system where the activities occurred or in a simple formula: the Educational Output is the Input plus the Process.

Educational input is everything that must be available to support the educational process; everything in this case means the manpower resources and non-man power resources, including their wishes as the guide for the process operation. The man power resources consist of: headmasters, teachers, school counselors, students, and staff of school; while the non-man power resources consist of: educational aids, equipment, money, study material, organization, the structure of
school organization, the rule of law, task description, planning/program and so forth. The wishes of inputs are vision, mission, goal, and the targets that will be realized by the school. Input readiness is needed in order that the educational process can be handled well and so as the prerequisite for the educational process.

Educational process is the changing of everything to be the other everything. In the scale of micro education or the school level, this process consists of the decision making, the institution management, the program management, learning-teaching activity, monitoring, and evaluating.

The process says to be qualified is if the coordination, the suitability and the guide of school input done harmoniously so it can create a good learning climate which can make an enjoyable learning condition for students, to increase the students’ learning interest so that the students are able to actualize themselves, express in the form of: students not only master the knowledge given by their teachers but also apply it in their everyday lives and are able to operate the ways to study.

Based on the system theory, this research will discuss the difference between the Regular Junior High School and the Open One
focusing on the English subject, that is the difference between the students’ English achievement of both school systems.

The inputs of a school organization will be the children with their own capability and background while the process, besides the children will be added with teachers who manage class activities using the curriculum (study materials, methods of teaching, educational media, and others).

The input and the process in both the Regular Junior High School and the Open one will influence the output that is the English achievement score.

The above matters (concerning the student inputs and the process of teaching and learning) can be described as follows: system theory says that the English learning achievement of students who learn in the regular junior high school and the open one are influenced by the input and the process of the educational system where the activities occur.

2. The Different Input of the Regular Junior High School and the Open One

Education is the process of developing the children so the input of both the Regular and the Open Junior High School are the
students who have finished their education in the Elementary School or in its level i.e. Madrasah Ibtidaiyah.

a. The Student Inputs of Regular Junior High School

The students who have graduated from Elementary School, Madrasah Ibtidaiyah and the same level, can join Junior High School. If there are too many applicants who will join the Junior High School, the candidates may have a selection test (Dep. P & K: 1993).

b. The Student Inputs of the Open Junior High School

Most student inputs of the Open Junior High School are children of 11-18 years of age with the following qualifications:

1) The students who have graduated from Elementary School, Madrasah Ibtidaiyah and those of the same level which cannot join the Regular Junior High School or Madrasah Tsanawiyah because of social, economical, and geographical reasons.

2) The dropouts of Regular Junior High School, Madrasah Tsanawiyah and the same level who still wish to continue their study (Dep. P & K. 1994: 10).

The student inputs of both schools are different in quality. The Student inputs of the Regular Junior High School have their own motivation to study which are supported by their parents while of the Open Junior High School are not.
The student inputs of Regular Junior High School is quite good seen from their motivation of study, and parents’ material and moral support.

3. The Difference of Educational Process of the Teaching-Learning of the Regular and the Open Junior High School

It is said that the process of learning-teaching activity in the Regular Junior High School is better than that in the Open One because of many reasons; the time of study in the Regular Junior High School is more frequent, and the progress of the students is always supervised by their teachers and the students’ assignment will complete this activity. While the process of learning teaching in the Open Junior High School is managed with the students self study. The teachers just measure the students’ progress of study through the prepared module.

4. English Learning in Junior High School

English learning in the Elementary School has now come to be carried out as it is supported by the Decree of Ministry of Education and Culture of the Republic of Indonesia No: 0487/4/1992 and the Decree of Ministry of Education and Culture of Republic of Indonesia No. 060/U/1993 (Rosdiana: 1997: 1); it is as an optional learning.

As mentioned in chapter I, that formally English is the first foreign language in Junior High School although in some institutions,
such as in Moslem Junior Secondary Schools (MTs), Arabic is also taught. In the Junior High Schools, English is taught four periods every week. Based on the supplement of the outline of Teaching Learning Program of Curriculum 1994, the objective of English teaching – learning is to develop the four English language skills namely listening, speaking, reading, and writing.

B. Literary Review

1. Definition of Learning

Brown (1987: 6) reveals that learning is an acquiring or getting of knowledge of a subject or a skill by study, experience, or instruction. It implies that learning takes place in an educational setting, for example in a classroom. There is one who facilitates the learning process of the learners to get knowledge or skills. As a result of learning, there is a change in the knowledge or skills after the process of learning. In this case the role of teachers as a communicator is essential (Lilly Wong Fillmore, 2000: 5).

Cronbach (1977: 92) defines that learning is usually reserved for relatively permanent change in behavior, interpretation and emotional response as a result of experience.
The importance of learning is not what is observable but the internal process of an individual in his effort to get a new association, namely association between stimulus and another stimulus, a response and another response, or stimulus and a response.

Despite many different ways of defining learning, there is a certain amount of agreement about what it involves. Nearly all definitions of learning include three concepts: change, behavior and experience.

Learning involves some sorts of change in an organism, in which this change makes changes in behaviors, and the change is brought about by experience.

As a result: learning is a relatively stable, unspecified change within an organism that makes a change in behavior, that is due to experience, and that cannot be caused by reflexes, maturation, instincts, nor the influences of fatigue, injuries nor drugs.

2. Definition of Teaching

The definition of teaching has developed from time to time; it still becomes a debate among educators. The debate also includes whether teaching is an art or a science. There are numerous
definitions of the term which have been generated from the way people actually teach.

Teaching can be thought as an art since teaching calls for inspiration, intuition, talent, and creativity; most of which cannot be taught. Meanwhile, teaching is thought as a science since it requires knowledge and skills that can be learnt. Most teachers agree that teaching includes both: artistic and scientific elements. So teachers should be both technically competence and thoughtful. They should be able to use a range of known strategies and also to invent new ones. They should have some simple routines that work for managing classes, but they should also be able to break from the routine when the situation calls for a change.

Brown (1987: 7) defines teaching as showing or helping someone to learn how to do something, giving instruction, guiding, in a study of something, providing with knowledge, causing to know or understand. It implies that teaching is a process of facilitating learners in a learning process.

Slameto (1995: 32) states that teaching is an activity to help, guide someone to get, change, or develop skills, attitudes, ideals, appreciation and knowledge. Teaching should direct learners to
change their behaviors. Further, he states that teaching is the guidance of learning; it shows that learners should dominate the classroom activities, teachers only guide them by considering the learners’ personality.

Further, Rebecca L. Oxford (1990: 10) states that the teacher has new functions: as a facilitator, helper, guide, consultant, adviser, coordinator, idea person, diagnostician, and co-communicator.

Meanwhile, Mary Finochiaro (1988: 2) states that teachers should grow throughout their lifetime in: the awareness of their own strengths and perhaps weaknesses (which can be overcome); more positive attitudes towards themselves, their students, their colleagues, the needs of their country and other countries; their deeper knowledge of the social and personality factors of their students that can influence learning, of the content of their discipline (English language); the enhancement of skills needed to present, practice, and appreciate the language system, literature, and culture of the target language with enthusiasm and clarity while instilling social, moral, ethical, and cultural values in their learners.
In summary, teaching is an activity to facilitate learning by means of guiding the learners to change and improve their knowledge, skills and attitudes. As long as there is no change in improvement in the learners’ behavior, it means that teaching has not taken place. A teacher has important roles impinging on teaching learning process in the classroom. Even, Jack C Richards (1970: 35) extremely states: “You need a teacher to learn English properly – you can’t learn it by yourself because there’s no-one to correct you”. The roles should fit the demand of the society, schools, colleges and the children themselves, including the subject he/she teaches.

Learning activity has a close meaningful with teaching activity. Even, in daily conversation people spontaneously speak them in learning-teaching activity term. But it does not mean that in a learning activity always needs a teacher who teaches, nor that a teaching activity always affects a learning activity. A student can do self-study (without facilitating any teachers); and in a teaching activity there is no a guarantee that learning activity surely occur for every student.
3. Achievement in English Learning

Learning achievement can be simply defined as the performance of student as a result of accomplishment of school-instruction activity; in school-based learning, it is defined by the specific objectives in terms of learning objectives.

There are some components that influence the result of English learning achievement. For example the information about how well the students learn is needed. Such information can help, for example, in planning the next phases of instruction, in selecting jobs or other programs relating to their learning.

Such planning and selection usually require teachers to judge the achievement in learning (including in English learning) according to certain standard.

Learning achievement is the level of mastering the study material that has been done by the students and it can be seen as their result of measurement and evaluation of learning activity expressed in the form of number, figure or symbol in certain period, for example: semester.
To know the students’ achievement in English learning in this study the writer uses standardized tests, those are the marks of national examinations.

**The Frame of Ideas**

The frame of ideas as the arguments to make the hypothesis can be presented as follows: student inputs of the Open Junior High School are worse than those of the Regular one. If the learning-teaching process in the Open Junior High School is better than that in the regular one, we hope that the output may be in the same quality, but the learning-teaching process in the Open Junior High School is not as good as the process in the Regular one so it can be expected that the output of the learning-teaching English in the Regular Junior High School will be better than that of the learning teaching English in the Open one. The detailed description of the similarities and the differences between the Regular and the Open Junior High school can be presented as follows:

**The Similarities:**

1. The curriculum
2. The objectives
3. Certification
4. The qualifications for the candidates

The students who have graduated form the Elementary School, the maximum age to register is 18 years old.

5. The students have the same chance to:

a. use all facilities at the Junior High School such as: library, sport equipments, laboratory, computers, etc.

b. continue their study to a higher level of education.

c. get the same final examination.

The differences:

<table>
<thead>
<tr>
<th>Regular Junior High School</th>
<th>Open Junior High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The place to study is at school</td>
<td>1. The place to study is at TKB/at any possible place</td>
</tr>
<tr>
<td>2. The status of the school can be government and non-government</td>
<td>2. The status of the school is Government school.</td>
</tr>
<tr>
<td>3. Teachers must be the graduation of the vocational education.</td>
<td>3. Bina Teachers must be The Graduation of the vocational education, while Pamong teachers are not.</td>
</tr>
</tbody>
</table>
4. The students study together with the teacher a long time at school
4. The students study by themselves guided by Pamong teacher

5. The students meet their teacher 5. The students meet their selves guided by Pamong
4 hours per week. 2 hours per week + self study.

6. Reference books are mainly Package books.
6. Using module, cassette, etc.

7. The students must wear a school uniform
7. No school uniform

8. There is a school fee. 8. No school fee

9. There is a school regulation
9. No detailed school regulation.

D. Hypothesis

The hypothesis in this matter is that students’ English achievement of the Regular Junior High School is better than that of the Open one. To analyze the data, the null hypothesis is proposed as following: There is no difference in students’ English achievement between the students of the Regular Junior High School and those of the Open one.
CHAPTER III
METHODS OF RESEARCH

A. Population and Sample

1. Population

Population is a set of inhabitants or individual that have at least one similar characteristic (Hadi, Sutrisno, 2000: 220). It is also called the universe. The similar characteristic can be natural such as: the people who were born in Indonesia, the gender, the white mice, etc., or it can be artificial such as: the children who are playing, all students of a school, grafting plantations, etc.

Meanwhile, Bruce W. Tuckman (1978: 227) states that population is group (for example: the students of the third year in a school system), about which the researcher is interested in gaining information and drawing conclusion.

Population is a group of individual persons, objects, or items from which samples are taken for statistical measurement (Webster’s Ninth New Collegiate Dictionary, 1991: 915-916).

The population of this thesis is all the third year students in the academic years of: 2000/2001, 2001/2002 and 2002/2003 that consists
of two groups: the Regular Junior High School and the Open one in ex sub-district of Loano, Purworejo regency, Central Java. The detailed population can be seen in Table 1. The abbreviation of RJHS stands for Regular Junior High School and the OJHS stands for Open Junior High School.

**Table 1. Research Population 2001-2003**

<table>
<thead>
<tr>
<th>No</th>
<th>Name of School</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RJHS</td>
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<tr>
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<tr>
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<td>272</td>
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<td>2</td>
<td>SLTPN 2 Loano</td>
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</tr>
<tr>
<td>3</td>
<td>SLTPN 1 Bener</td>
<td>181</td>
</tr>
<tr>
<td>4</td>
<td>SLTPN 2 Bener</td>
<td>45</td>
</tr>
<tr>
<td>5</td>
<td>SLTPN 1 Gebang</td>
<td>324</td>
</tr>
<tr>
<td>6</td>
<td>SLTP BK Loano</td>
<td>115</td>
</tr>
<tr>
<td>7</td>
<td>SLTP Setia Budi</td>
<td>29</td>
</tr>
<tr>
<td>8</td>
<td>SLTP BK Bener</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>SLTP Barata Bener</td>
<td>53</td>
</tr>
<tr>
<td>10</td>
<td>SLTP BK Kalijambe</td>
<td>29</td>
</tr>
<tr>
<td>11</td>
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<td>12</td>
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<td><strong>2002:</strong></td>
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<td>3. SLTPN 1 Bener</td>
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<td>4. SLTPN 2 Bener</td>
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<td>5. SLTPN 1 Gebang</td>
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<tr>
<td>6. SLTP BK Loano</td>
<td>97</td>
<td>-</td>
</tr>
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<td>7. SLTP Setia Budi</td>
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<td>8. SLTP BK Bener</td>
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<td>9. SLTP Barata Bener</td>
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<td>-</td>
</tr>
<tr>
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<td>-</td>
</tr>
<tr>
<td>11. SLTP BK Gebang</td>
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<td>-</td>
</tr>
<tr>
<td>12. SLTP BK Seren</td>
<td>103</td>
<td>-</td>
</tr>
<tr>
<td>13. SLTP Islam Berjan</td>
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<td>-</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
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<td>201</td>
<td>-</td>
<td></td>
</tr>
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<td>3. SLTPN 1 Bener</td>
<td>189</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>4. SLTPN 2 Bener</td>
<td>65</td>
<td>-</td>
<td></td>
</tr>
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<td>5. SLTPN 1 Gebang</td>
<td>234</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLTP BK Loano</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>-----</td>
<td>---</td>
</tr>
<tr>
<td>7.</td>
<td>SLTP Setia Budi</td>
<td>33</td>
<td>-</td>
</tr>
<tr>
<td>8.</td>
<td>SLTP BK Bener</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>SLTP Barata Bener</td>
<td>63</td>
<td>-</td>
</tr>
<tr>
<td>10.</td>
<td>SLTP BK Kalijambe</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>11.</td>
<td>SLTP BK Gebang</td>
<td>18</td>
<td>-</td>
</tr>
<tr>
<td>12.</td>
<td>SLTP BK Seren</td>
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<td>-</td>
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<table>
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<tr>
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<tbody>
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<td>4295</td>
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</tr>
</tbody>
</table>

Notes:

RJHS = Regular Junior High School

OJHS = Open Junior High School

2. Sample and Sampling.

   a. Sample

   Sample is a subgroup of population. Pollard (1972) states that the part which is available to us is called a sample, while Wetherill (1972: 7) defines that sample is an arbitrary subset of the population. A sample is a part of the population that is taken to represent it.
In inferential statistics, a researcher selects a sample from a population, derives data from the sample then generalizes from the sample data to the population. The accuracy of the inference depends on how representative the sample is of the population. The samples of this thesis are presented in Table 2.

**Table 2. Research Sample of 2001-2003**

<table>
<thead>
<tr>
<th>No</th>
<th>Name of School</th>
<th>Number of students</th>
<th>RJHS (20%)</th>
<th>OJHS (All)</th>
</tr>
</thead>
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<tr>
<td>(1)</td>
<td>SLTPN 1 Loano</td>
<td>55</td>
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<td>17</td>
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<td>2.</td>
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</tr>
<tr>
<td>3.</td>
<td>SLTPN 1 Bener</td>
<td>37</td>
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<td>26</td>
</tr>
<tr>
<td>4.</td>
<td>SLTP 2 Bener</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>SLTPN 1 Gebang</td>
<td>65</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>6.</td>
<td>SLTP BK Loano</td>
<td>23</td>
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<td></td>
</tr>
<tr>
<td>7.</td>
<td>SLTP Setia Budi</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>SLTP BK Bener</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>SLTP Barata Bener</td>
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<tr>
<td>10.</td>
<td>SLTP BK Kalijambe</td>
<td>6</td>
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</tr>
<tr>
<td>11.</td>
<td>SLTP BK Gebang</td>
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<td></td>
</tr>
<tr>
<td>12.</td>
<td>SLTP BK Seren</td>
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<td>13.</td>
<td>SLTP Islam Berjan</td>
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<tr>
<td>(1)</td>
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<td>(4)</td>
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<td>1. SLTPN 1 Loano</td>
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<td>56</td>
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<td>7. SLTP Setia Budi</td>
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<td>8. SLTP BK Bener</td>
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<td>11. SLTP BK Gebang</td>
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<td>12. SLTP BK Seren</td>
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<table>
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<tbody>
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<td><strong>2003:</strong></td>
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<td>-</td>
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<td>3. SLTPN 1 Bener</td>
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<td>SLTPN 2 Bener</td>
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<tr>
<td>SLTPN 1 Gebang</td>
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<td></td>
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<tr>
<td>SLTP Setia Budi</td>
<td>6</td>
<td>-</td>
<td></td>
</tr>
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<td>SLTP BK Bener</td>
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<td>-</td>
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</tr>
<tr>
<td>SLTP Barata Bener</td>
<td>12</td>
<td>-</td>
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</tr>
<tr>
<td>SLTP BK Kalijambe</td>
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<td>-</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>SLTP BK Seren</td>
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<td>-</td>
<td></td>
</tr>
<tr>
<td>SLTP Islam Berjan</td>
<td>3</td>
<td>-</td>
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<th>52</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number</td>
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<td>180</td>
</tr>
</tbody>
</table>

Notes:

RJHS = Regular Junior High School

OJHS = Open Junior High School

Based on SK Bupati Purworejo Number: 188.4/04/2001 about the nomenclature of SLTP, SMU and SMK in Purworejo Regency so the numbers of the Government SLTP are changed. Including the Government SLTP in the ex district of Loano, Purworejo i.e.: SLTPN 1 Loano is changed to be SLTPN 25 Purworejo; SLTPN 2 Loano is changed to be SLTPN 29.
Purworejo; SLTPN 1 Gebang is changed to be SLTPN 22 Purworejo; SLTPN 1 Bener is changed to be SLTPN 19 Purworejo; SLTPN 2 Bener is changed to be SLTPN 37 Purworejo. According to SK Minister of Education No. 037/U/2004 dated 26 April 2004 the name of SLTPN was changed to SMPN.

b. Sampling

Sampling is the act, process, or technique of selecting suitable sample (Merriam Websters. 1991: 1040). There are two sampling techniques, those are Random sampling and non-random sampling.

This thesis operates an unrestricted proportional random sampling technique with computer. In this case, the researcher takes the sample from each of the sub-population by considering the amount of every sub-population. All of the subject numbers of the taken samples can be seen in the appendix.
B. Variables and Research Instruments

1. Variables

This research consists of two variables which are compared: English Learning Achievement (NEM) of the Regular Junior High School Students and English Learning Achievement (NEM) of the Open Junior High School Students.

2. Research Instruments

There is one instrument in this research that is utilized to obtain the data from the third year students of SMP in the ex sub-district of Loano, Purworejo, Kedu Central Java. Those are the documents of the students' National English Examination.

C. Data Collection Technique

In managing the document data, the researcher, firstly, gathered the document of the English achievement test from the thirteen Regular Junior High School and three from the Open Junior High School. The second step is to take randomly 20% of the sample of the thirteen Regular Junior High School and all of the three Open Junior High Schools with the SPS package program. Next, the researcher circled the numbers of the taken subjects from the document and then, copy the data.
The copied data were used to analyse by using 't' test formula with the computer. The detailed data can be seen in the appendix.

**Place and Time of Research**

The research was carried out in March 2002 – August, 2003 in the Junior High School both of the regular and the Open one, in the ex district of Loano, Purworejo which consists of three sub-districts, those are the sub-district of Gebang, the sub-district of Bener and the sub-district of Loano), especially for the third year students. The map of Purworejo regency, including the ex district of Loano is presented on the next page.

**E. Research Design**

This research is an expost-facto research as the writer did not directly control or manipulate the variable so it meets the definition:

"... the systematic empirical inquiry which the scientist does not have control of independent variables, because their manifestations have already been occured or because they are inherently not manipulable. Inherences about relations among variables are made without direct intervention, from concomitant variations of independent and dependent variables (Kerlinger, 1981: 379)."

The research design can be described as follows:

\[ X_1 \rightarrow X_2 \]
Where:

$X_1$: English Learning Achievement of the Regular Junior High School.

$X_2$: English Learning Achievement of the Open Junior High School.

$X_1$ is being compared with $X_2$ by using the 't' test formula.

F. Data Analysis Technique

The data analysis techniques used in this research consist of descriptive analysis and inferential statistics.

1. Descriptive Analysis

The descriptive analysis used to describe the English learning achievement of the third grade of SLTP students both of the regular and the open one. The statistics used in this computation are means, and standard deviations. The mean is average score of the subject of this study. The standard deviation is the average variability of all the scores around the mean.

2. Inferential Statistics

a. Data analysis

To analysis the data, the writer used the 't' test formula:

$$
\bar{X}_1 - \bar{X}_2
$$
\[ t = \frac{\bar{X}_1 - \bar{X}_2}{S_{MD}} \]

in which:

\( \bar{X}_1 \) : Mean of the \( X_1 \) sample.

\( \bar{X}_2 \) : Mean of the \( X_2 \) sample.

\( S_{MD} \) : Standard Error of the Mean difference

(Gene V. Glass, Kenneth D. Hopkins, 1984: 243).

b. Test of hypothesis

In approving the hypothesis the alternative hypothesis (\( h_a \)) changed to the null hypothesis (\( h_0 \)) (Suharsimi Arikunto, 2002: 67).

The alternative hypothesis is “There is difference in students’ English achievement between the students of the Regular Junior High School and those of the Open One”.

The null hypothesis that was tested is “There is no difference in students’ English achievement between the students of the Regular Junior High School and those of the Open one”.

The formula to test the hypothesis can be presented as follows: If the value of the ‘t’ has the ‘p’ < 0.05 it means that the
‘h₀’ (null hypothesis) is rejected and the ‘hₐ’ (alternative hypothesis) is accepted but if the value of the ‘t’ has the ‘p’ > 0.05, it means that the ‘h₀’ is accepted and the ‘hₐ’ rejected.

The norms to test the hypothesis are presented as follows:

(Hadi, Sutrisno. 1997: 29):

<table>
<thead>
<tr>
<th>No</th>
<th>Probable Error Condition</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>p &lt; 0.01</td>
<td>Very significant</td>
</tr>
<tr>
<td>2</td>
<td>p &lt; 0.05</td>
<td>Significant</td>
</tr>
<tr>
<td>3</td>
<td>p &lt; 0.15</td>
<td>Quite significant</td>
</tr>
<tr>
<td>4</td>
<td>p &lt; 0.30</td>
<td>Less significant</td>
</tr>
<tr>
<td>5</td>
<td>p &gt; 0.30</td>
<td>Unsignificant</td>
</tr>
</tbody>
</table>
CHAPTER IV
RESEARCH FINDINGS

There are four main issues discussed in this chapter. The first is the presentation of data analysis result. The second is the interpretation of result. The two issues above discussed in a way that is in line with the arrangement of the research problem formulation and hypothesis.

A. The Results of Data Analysis

The result of the data analysis deals with a descriptive analysis and an inferential analysis. The descriptive analysis is concerned with the mean, standard deviation, quartile, the highest score and the lowest score. The inferential analysis is the result the computation by using 't' test formula and the hypothesis test.

1. Descriptive Analysis

2. Descriptive Analysis of the Academic Year 2000/2001

The writer presents the descriptive analysis of the variables of this study, i.e English achievement of the Regular Junior High School and the Open Junior High School.

a. The data of the English achievement of the Regular Junior High School and The Open one. Table 4 shows the possible highest and the lowest score in both of the English achievement of the Regular Junior High School and The Open one.

**Table 4. The Possible Highest and The Lowest Score of The English Achievement**

<table>
<thead>
<tr>
<th>No</th>
<th>Category of Junior High School</th>
<th>The Possible Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Highest</td>
</tr>
<tr>
<td>1</td>
<td>Regular</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Open</td>
<td>10</td>
</tr>
</tbody>
</table>

Seeing the possible highest score and the possible lowest score above, the writer draws norms used to make interpretation on this study. The normal distribution can be used for deciding the student’s capability using an hypothetical mean and ideal standard deviation.
The hypothetical mean can be calculated by the possible highest score of the students and the lowest possible score divided by 2. The ideal standard deviation is the highest score minus mean divided by 3.

Referring to the way mentioned above, the writer makes the norms used to make interpretations.

The hypothetical mean score is (10 + 0):2 = 10 : 2 = 5. The ideal Standard Deviation is 10 - 5 : 3 = 1.66.

The conversion criterion to classify the scores into six scales of the ideal standard deviation of the scores can be seen as in Table 5 of the English achievement of the Regular Junior High School and the Open one.

**Table 5. The Conversion Table by Six Scales of the English Achievement Scores (NEM) of the Regular and the Open Junior High School**

<table>
<thead>
<tr>
<th>No</th>
<th>Class Interval</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>1</td>
<td>8.34 – 10.00</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>Very Good</td>
</tr>
<tr>
<td>3</td>
<td>5.00 – 6.66</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>Bad</td>
</tr>
</tbody>
</table>
1) Data Description of the Regular Junior High School English Achievement of the 2000/2001 Academic Year

Table 6. The Frequency Distribution of the Regular Junior High School English Achievement

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>F</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8.34 – 10.00</td>
<td>2</td>
<td>0.69</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>13</td>
<td>4.47</td>
<td>Very Good</td>
</tr>
<tr>
<td>3</td>
<td>5.00 – 6.66</td>
<td>154</td>
<td>52.92</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>122</td>
<td>41.92</td>
<td>Bad</td>
</tr>
<tr>
<td>5</td>
<td>1.66 – 3.32</td>
<td>0</td>
<td>0</td>
<td>Very Bad</td>
</tr>
<tr>
<td>6</td>
<td>0 - 1.65</td>
<td>0</td>
<td>0</td>
<td>Extremely Bad</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>291</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, it can be observed that there are 2 students (0.69%) in the excellent category, 13 students (4.47%) in very good category, 154 students (52.92%) in good category, 122 students (41.92%) in bad category and no student (0%) in very bad category, and no student (0%) in extremely bad category.
The mean of the English achievement of the Regular Junior High School is 5.300103093 and the standard deviation is 0.839143851. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is higher than the hypothetical mean score (5.300103093 > 5).

The empirical mean of the English achievement of the Regular Junior High School (5.300103093) is in the frequency distribution (5.00 - 6.66) that falls in a good position.

2) Data Description of the English Achievement of the Open Junior High School

Table 7. The Frequency Distribution of the English Achievement of the Open Junior High School

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>F</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1</td>
<td>8.34 – 10.00</td>
<td>0</td>
<td>0</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>0</td>
<td>0</td>
<td>Very Good</td>
</tr>
<tr>
<td>3</td>
<td>5.00 – 6.66</td>
<td>4</td>
<td>5.97</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>63</td>
<td>94.03</td>
<td>Bad</td>
</tr>
<tr>
<td>5</td>
<td>1.66 – 3.32</td>
<td>0</td>
<td>0</td>
<td>Very Bad</td>
</tr>
<tr>
<td>6</td>
<td>0 - 1.65</td>
<td>0</td>
<td>0</td>
<td>Extremely Bad</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>67</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
From the table above, it can be observed that there is no student (0%) in the excellent category, no student (0%) in very good category, 4 students (5.97%) in good category, 63 students (94.03%) in bad category, no student (0%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Open Junior High School is 4.422985075 and the standard deviation is 0.380474245. The hypothetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is lower than the hypothetical mean score (4.422985075 < 5.00).

The mean of the English achievement of the Open Junior High School (4.422985075) in the frequency distribution of (3.33 - 4.99) falls in a bad position.

3. Descriptive Analysis of the Academic Year 2001/2002

a. Data Description of the English Achievement of the Regular Junior High School

**Table 8. The Frequency Distribution of the Regular Junior High School English Achievement of the 2001/2002 Academic Year**

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>F</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1</td>
<td>8.34 – 10.00</td>
<td>0</td>
<td>0</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>5</td>
<td>1.61</td>
<td>Very Good</td>
</tr>
</tbody>
</table>
From the table above, it can be observed that there is no student (0%) in the excellent category, 5 students (1.61%) in very good category, 96 students (30.88%) in good category, and 206 students (66.23%) in bad category, 4 students (1.28%) in very bad category and no student (0%) in extremely bad category.

The empirical mean of English achievement of the Regular Junior High School is 4.747363344 and the standard deviation is 0.649556767. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is lower than the hypothetical mean score (4.747363344 < 5).

The empirical mean of the English achievement of the Regular Junior High School (4.747363344) is in the frequency distribution (3.33 - 4.99) falls in a bad position.

b. Data Description of the English Achievement of the Open Junior High School
### Table 9. The Frequency Distribution of the English Achievement of the Open Junior High School 2001/2002 academic year

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>f</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>8.34 – 10.00</td>
<td>0</td>
<td>0</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>0</td>
<td>0</td>
<td>Very Good</td>
</tr>
<tr>
<td>3</td>
<td>5.00 – 6.66</td>
<td>0</td>
<td>0</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>47</td>
<td>77.05</td>
<td>Bad</td>
</tr>
<tr>
<td>5</td>
<td>1.66 – 3.32</td>
<td>14</td>
<td>22.95</td>
<td>Very Bad</td>
</tr>
<tr>
<td>6</td>
<td>0 - 1.65</td>
<td>0</td>
<td>0</td>
<td>Extremely Bad</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>61</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, it can be observed that there is no student (0%) in the excellent category, no student (0%) in very good category, no student (0%) in good category, 47 students (77.05%) in bad category, 14 students (22.95%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Open Junior High School is 3.670819672 and the standard deviation is
0.476239768. The hypothetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is lower than the hypothetical mean score (3.670819672 < 5.00).

The empirical mean of the English achievement of the Open Junior High School (3.670819672) in the frequency distribution of (3.33 - 4.99) falls in a bad position.

4. Descriptive Analysis of the Academic Year 2002/2003

a. Data Description of the Regular Junior High School English Achievement

Table 10. The Frequency Distribution of the English Achievement of the Regular Junior High School of the 2002/2003 Academic Year

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>f</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>1</td>
<td>8.34 – 10.00</td>
<td>3</td>
<td>1.16</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>30</td>
<td>11.63</td>
<td>Very Good</td>
</tr>
<tr>
<td>3</td>
<td>5.00 – 6.66</td>
<td>195</td>
<td>75.58</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>28</td>
<td>10.85</td>
<td>Bad</td>
</tr>
<tr>
<td>5</td>
<td>1.66 – 3.32</td>
<td>1</td>
<td>0.39</td>
<td>Very Bad</td>
</tr>
<tr>
<td>6</td>
<td>0 - 1.65</td>
<td>1</td>
<td>0.39</td>
<td>Extremely Bad</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>258</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
From the table above, it can be observed that there are 3 students (1.16%) in the excellent category, 30 students (11.63%) in very good category, 195 students (75.58%) in good category, and 28 students (10.85%) in very bad category, 1 student (0.39) in very bad category and 1 student (0.39%) in extremely bad category.

The empirical mean of the English achievement of the Regular Junior High School is 5.816627907 and the standard deviation is 0.883568477. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The hypothetical mean is higher than the ideal mean score (5.816627907 > 5).

The empirical mean of the English achievement of the Regular Junior High School (5.816627907) is in the frequency distribution (5.00 - 6.66) falls in a good position.

c. Data Description of the English Achievement of the Open Junior High School of the 2002/2003 Academic Year

Table 11. The Frequency Distribution of the English Achievement of the Open Junior High School

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>F</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.34 – 10.00</td>
<td>0</td>
<td>0</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>0</td>
<td>0</td>
<td>Very Good</td>
</tr>
<tr>
<td></td>
<td>5.00 – 6.66</td>
<td>29</td>
<td>55.77</td>
<td>Good</td>
</tr>
<tr>
<td>---</td>
<td>---------</td>
<td>----</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>23</td>
<td>44.23</td>
<td>Bad</td>
</tr>
<tr>
<td>5</td>
<td>1.66 – 3.32</td>
<td>0</td>
<td>0</td>
<td>Very Bad</td>
</tr>
<tr>
<td>6</td>
<td>0 - 1.65</td>
<td>0</td>
<td>0</td>
<td>Extremely Bad</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>52</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, it can be observed that there is no student (0%) in the excellent category, no student (0%) in very good category, 29 students (55.77%) in good category, 23 students (44.23%) in bad category, no student (0%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Open Junior High School is 4.989423077 and the standard deviation is 0.514245739. The hypothetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is higher than the hypothetical mean score (4.989423077 < 5.00).

The empirical mean of the English achievement of the Open Junior High School (4.989423077) in the frequency distribution of (3.33 - 4.99) falls in a bad position.

a. Data Description of the Regular Junior High School English Achievement

Table 12. The Frequency Distribution of the Regular Junior High School English Achievement for Three Years (2001 - 2003)

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>F</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>8.34 – 10.00</td>
<td>5</td>
<td>0.58</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>48</td>
<td>5.58</td>
<td>Very Good</td>
</tr>
<tr>
<td>3</td>
<td>5.00 – 6.66</td>
<td>445</td>
<td>51.74</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>356</td>
<td>41.40</td>
<td>Bad</td>
</tr>
<tr>
<td>5</td>
<td>1.66 – 3.32</td>
<td>5</td>
<td>0.58</td>
<td>Very Bad</td>
</tr>
<tr>
<td>6</td>
<td>0 - 1.65</td>
<td>1</td>
<td>0.12</td>
<td>Extremely Bad</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>860</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, it can be observed that there are 5 students (0.58%) in the excellent category, 48 students (5.58%) in very good category, 445 students (51.74%) in good category, 356 students (41.40%) in bad category and 5 students (0.58%) in very bad category, and 1 student (0.12%) in extremely bad category.
The empirical mean of the English achievement of the Regular Junior High School is 5.255174419 and the standard deviation is 0.901271043. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is higher than the hypothetical mean score (5.255174419 > 5).

The empirical mean of the English achievement of the Regular Junior High School (5.255174419) is in the frequency distribution (5.00 - 6.66) falls in a good position.

b. Data Description of the English Achievement of the Open Junior High School

**Table 13. The Frequency Distribution of the English Achievement of the Open Junior High School for Three Years (2001 - 2003)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Class Interval</th>
<th>f</th>
<th>%</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1</td>
<td>8.34 – 10.00</td>
<td>0</td>
<td>0</td>
<td>Excellent</td>
</tr>
<tr>
<td>2</td>
<td>6.67 – 8.33</td>
<td>0</td>
<td>0</td>
<td>Very Good</td>
</tr>
<tr>
<td>3</td>
<td>5.00 – 6.66</td>
<td>33</td>
<td>18.33</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>3.33 – 4.99</td>
<td>133</td>
<td>73.89</td>
<td>Bad</td>
</tr>
<tr>
<td>5</td>
<td>1.66 – 3.32</td>
<td>14</td>
<td>7.78</td>
<td>Very Bad</td>
</tr>
<tr>
<td>6</td>
<td>0 - 1.65</td>
<td>0</td>
<td>0</td>
<td>Extremely Bad</td>
</tr>
<tr>
<td>-----</td>
<td>----------</td>
<td>-----</td>
<td>-----</td>
<td>---------------</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>180</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, it can be observed that there is no student (0%) in the excellent category, no student (0%) in very good category, 33 students (18.33%) in good category, 133 students (73.89%) in bad category, 14 students (7.78%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Open Junior High School is 4.331722222 and the standard deviation is 0.694533186. The hypothetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is lower than the hypothetical mean score (4.331722222 < 5.00).

The empirical mean of the English achievement of the Open Junior High School (4.331722222) in the frequency distribution of (3.33 - 4.99) falls in a bad position.


The development of the three years of the empirical mean both of the Regular Junior High School (RJHS) and the Open Junior High School (OJHS) can be described as follows:
Table 14. The Three Years’ Mean Development

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RJHS</td>
<td>5.30</td>
<td>4.75</td>
<td>5.82</td>
<td></td>
</tr>
<tr>
<td>OJHS</td>
<td>4.42</td>
<td>3.67</td>
<td>4.99</td>
<td></td>
</tr>
</tbody>
</table>

From the table above, the means of the Regular Junior High School as compared with the Open Junior High School are always higher for three years.

5. Inferential Analysis

a. The Result of the Computation of the 't' test Formula of the Sample Data of 2000/2001

The result of the computation of the 't' test formula by computer shown that the 't' value is 12.90779812 and d.f: 356.

b. The Result of the Computation of the 't' test Formula of the Sample Data of 2001/2002

The result of the computation of student 't' formula by computer shown that the 't' value is 15.01422482 and d.f: 370.
c. The Result of the Computation of the 't' test Formula of the Sample Data of 2002/2003

The result of the computation of the 't' test formula by computer shown that the 't' value is 9.364998928 and d.f: 308.

d. The Result of the Computation of the 't' test formula of the Total Sample Data of 2000/2001 - 2002/2003

The result of the computation of 't' test formula by computer shown that the 't' value is 15.30510017 and d.f: 1038. The detailed computation can be seen in the appendix.

B. Hypothesis Test

The analysis utilized the inferential statistics, i.e, 't' test. The result of the 't' test values are displayed as follows:

1. Hypothesis Test of the Comparison of the English Achievement (NEM) between the Regular Junior High School and the Open Junior High School for the Academic Year 2000/2001

The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2000/2001 as the result of computerized 't' student can be described as follows: 't': 12.90779812 with the d.f: 356 has the 'p': 0.00 < 0.01 so it is very
significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.

2. Hypothesis Test of the Comparison of the English Achievement (NEM) between the Regular Junior High School and the Open Junior High School for the Academic Year 2001/2002

The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2001/2002 as the result of computerized 't' student can be described as follows: 't': 15.01422482; d.f: 370 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.

3. Hypothesis Test of the Comparison of the English Achievement (NEM) between the Regular Junior High School and the Open Junior High School for the Academic Year 2002/2003

The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2002/2003 as the result of computerized 't' student can be described as follows: 't': 9.364998928 with the d.f: 308 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.
4. Hypothesis Test of the Comparison of the English Achievement (NEM) between the Regular Junior High School and the Open Junior High School for the Academic Year 2000/2001 - 2002/2003

The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2000/2001 - 2002/2003 as the result of computerized 't' student can be described as follows: 't': 15.30510017 with the d.f: 1038 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.

C. Discussion

The writer presents the descriptive interpretation of the data obtained from the result of National English achievement test (NEM) and then the hypothesis test, as follows:

1. Data Interpretation

   a. The English Learning Achievement of the Regular Junior High Schools

      Based on the descriptive analysis of 2000/2001 - 2002/2003 it is found that there are 5 students (0.58%) in the excellent category, 48 students (5.58%) in very good category, 445 students (51.74%) in good category, 356 students (41.40%) in bad category
and 1 students (0.12%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Regular Junior High School is 5.26 and the standard deviation is 0.90. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is higher than the hypothetical mean score ($5.26 > 5$). The empirical mean of the English achievement of the Regular Junior High School (5.26) is in the frequency distribution (5.00 - 6.66) falls in a good position.

The interpretation of this matter is that the process of teaching and learning English in the Regular Junior High School running well. It can be seen that the Regular Junior High School's students have been aware to highly improve their learning and so they can improve their English learning achievement (NEM).

b. The English Learning Achievement of the Open Junior High Schools

Based on the descriptive analysis, it is found that there is no student (0%) in the excellent category, no student (0%) in very good category, 33 students (18.33%) in good category, 133 students (73.89%) in bad category, 14 students (7.78%) in very bad category, and no student (0%) in extremely bad category.
The empirical mean of the English achievement of the Open Junior High School is 4.33 and the standard deviation is 0.69. The hypothetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is lower than the hypothetical mean score (4.33 < 5.00).

The empirical mean of the English achievement of the Open Junior High School (4.33) in the frequency distribution of (3.33 - 4.99) falls in a bad position.

The interpretation is that the process of teaching and learning English in the Open Junior High School not running well. It can be seen that the Open Junior High School students have not been aware to highly improve their learning and so it can't improve their English learning achievement.

2. Hypothesis Test Interpretation
   a. The Comparison between The English Achievement of the Regular Junior High School and the Open Junior High School for the year of 2000/2001

   The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2000/2001 as the result of computerized 't' student can be described as follows: 't': 12.90779812 with the d.f: 356 has the 'p': 0.00 < 0.01
so it is very significant for the 5% level of significance. This indicates that the alternative hypothesis is accepted and null hypothesis is rejected.

From the above discussion, it can be concluded that the English Achievement (NEM) of the Regular Junior High School students are higher than of the English Achievement (NEM) of the Open Junior High School students.

b. The Comparison between The English Achievement of the Regular Junior High School and the Open Junior High School for the year of 2001/2002

The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2001/2002 as the result of computerized 't' student can be described as follows: 't': 15.01422482; d.f: 370 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the alternative hypothesis is accepted and null hypothesis is rejected.

From the above discussion, it can be concluded that the English Achievement (NEM) of the Regular Junior High School students are higher than of the English Achievement (NEM) of the Open Junior High School students.
c. The Comparison between The English Achievement of the Regular Junior High School and the Open Junior High School for the year of 2002/2003

The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2002/2003 as the result of computerized 't' student can be described as follows: 't': 9.364998928 with the d.f: 308 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the alternative hypothesis is accepted and null hypothesis is rejected.

From the above discussion, it can concluded that the English Achievement (NEM) of the Regular Junior High School students are higher than of the English Achievement (NEM) of the Open Junior High School students.

d. The Comparison between The English Achievement of the Regular Junior High School and the Open Junior High School for the year of 2000/2001 - 2002/2003

The comparison between the Regular Junior High School and the Open Junior High School for the academic year 2000/2001 - 2002/2003 as the result of computerized 't' student can be described as follows: 't': 15.30510017 with the d.f: 1038 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of
significance. This indicates that the alternative hypothesis is accepted and null hypothesis is rejected.

From the above discussion, it can be concluded that the English Achievement (NEM) of the Regular Junior High School students are higher than of the English Achievement (NEM) of the Open Junior High School students.
CHAPTER V
CONCLUSION AND SUGGESTION

All the findings of the study which are based on the problem, the objectives, and the hypothesis of this study have been briefly discussed in the previous chapters. Now, the writer comes to the conclusion and suggestion which will be discussed separately.

A. Conclusion

Based on the research findings and their discussion in the previous chapters, the writer can draw the following conclusions:

1. Concerning the English Achievement of the Regular Junior High School
   a. 2000/2001

   There are 2 students (0.69%) in the excellent category, 13 students (4.47%) in very good category, 154 students (52.92%) in good category, 122 students (41.92%) in bad category and no student (0%) in very bad category, and no student (0%) in extremely bad category.

   The empirical mean of the English achievement of the Regular Junior High School is 5.26 and the standard deviation is
0.90. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is higher than the hypothetical mean score \((5.26 > 5)\). The empirical mean of the English Achievement of the Regular Junior High School \((5.26)\) is in the frequency distribution \((5.00 - 6.66)\) falls in a good position.

b. 2001/2002

There is no student \((0\%)\) in the excellent category, 5 students \((1.61\%)\) in very good category, 96 students \((30.88\%)\) in good category, and 206 students \((66.23\%)\) in bad category, 4 student \((1.28\%)\) in very bad category and no student \((0\%)\) in extremely bad category.

The empirical mean of the English achievement of the Regular Junior High School is 4.75 and the standard deviation is 0.65. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is lower than the hypothetical mean score \((4.75 < 5)\). The mean of the English achievement of the Regular Junior High School \((4.75)\) is in the frequency distribution \((3.33 - 4.99)\) falls in a bad position.
c. 2002/2003

There are 3 students (1.16%) in the excellent category, 30 students (11.63%) in very good category, 195 students (75.58%) in good category, and 28 students (10.85%) in very bad category, 1 student (0.39) in very bad category and 1 student (0.39%) in extremely bad category.

The empirical mean of the English achievement of the Regular Junior High School is 5.82 and the standard deviation is 0.65. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is higher than the hypothetical mean score (5.82 > 5). The empirical mean of the English achievement of the Regular Junior High School (5.82) is in the frequency distribution (5.00 - 6.66) falls in a good position.


There are 5 students (0.58%) in the excellent category, 48 students (5.58%) in very good category, 445 students (51.74%) in good category, 356 students (41.40%) in bad category and 1 student (0.12%) in very bad category, and no student (0%) in extremely bad category.
The empirical mean of the English achievement of the Regular Junior High School is 5.26 and the standard deviation is 0.90. The hypothetical mean is 5 while the ideal standard deviation is 1.66. The empirical mean is higher than the ideal hypothetical score (5.26 > 5). The empirical mean of the English achievement of the Regular Junior High School (5.26) is in the frequency distribution (5.00 - 6.66) falls in a good position.

2. Concerning the English Achievement of the Open Junior High School
   a. 2000/2001

   There is no student (0%) in the excellent category, no student (0%) in very good category, 4 students (5.97%) in good category, no student (0%) in bad category, no student (0%) in very bad category, and no student (0%) in extremely bad category.

   The empirical mean of the English achievement of the Open Junior High School is 4.33 and the standard deviation is 0.69. The hypothetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is lower than the ideal mean score (4.33 < 5.00). The empirical mean of the English achievement of the Open Junior High School (4.33) in the frequency distribution of (3.33 - 4.99) falls in a bad position.
b. 2001/2002

There is no student (0%) in the excellent category, no student (0%) in very good category, no student (0%) in good category, 47 students (77.05%) in bad category, 14 students (22.95%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Open Junior High School is 3.67 and the standard deviation is 0.48. The hypothetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is lower than the ideal mean score (3.67 < 5.00). The empirical mean of the English achievement of the Open Junior High School (3.67) in the frequency distribution of (3.33 - 4.99) falls in a bad position.

c. 2002/2003

There is no student (0%) in the excellent category, no student (0%) in very good category, 29 students (55.77%) in good category, 23 students (44.23%) in bad category, no student (0%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Open Junior High School is 4.99 and the standard deviation is 0.51. The
hyphotetical mean is 5.00 and the ideal standard deviation is 1.66.

The empirical mean is lower than the hyphotetical mean score (4.99 < 5.00). The empirical mean of the English achievement of the Open Junior High School (4.99) in the frequency distribution of (3.33 - 4.99) falls in a bad position.


There is no student (0%) in the excellent category, no student (0%) in very good category, 33 students (18.33%) in good category, 133 students (73.89%) in bad category, 14 students (7.78%) in very bad category, and no student (0%) in extremely bad category.

The empirical mean of the English achievement of the Open Junior High School is 4.33 and the standard deviation is 0.69. The hyphotetical mean is 5.00 and the ideal standard deviation is 1.66. The empirical mean is lower than the ideal mean score (4.33 < 5.00). The empirical mean of the English achievement of the Open Junior High School (4.33) in the frequency distribution of (3.33 - 4.99) falls in a bad position.

3. Concerning the 't' test analysis
   a. 2000/2001
Based on the 't' test analysis, it can be concluded that there is a significant difference between the English achievement of the Regular Junior High School and the English Achievement of the Open Junior High School. The value of 't': 12.90779812 with the d.f: 356 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.

b. 2001/2002

Based on the 't' test analysis, it can be concluded that there is a significant difference between the English achievement of the Regular Junior High School and the English achievement of the Open Junior High School. The value of 't': 15.014224482; d.f: 370 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.

c. 2002/2003

Based on the 't' test analysis, it can be concluded that there is a significant difference between the English achievement of the Regular Junior High School and the English achievement of the Open Junior High School. The value of 't': 9.364998928 with the
d.f: 308 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.


Based on the 't' test analysis, it can be concluded that there is a significant difference between the English achievement of the Regular Junior High School and the English achievement of the Open Junior High School. The value of 't': 15.30510017 with the d.f: 1038 has the 'p': 0.00 < 0.01 so it is very significant for the 5% level of significance. This indicates that the null hypothesis is rejected and the alternative hypothesis is accepted.

B. Suggestion

The suggestion will be given to the following persons: English teachers of the Regular Junior High School, the Regular Junior High School students, the Open Junior High School, the Open Junior High School students and the other researchers.

1. To the Headmaster of the Regular Junior High School and the Open Junior High School
The empirical mean of the English achievement can still be promoted to a higher point by improving the management (input-process-output) to make a realistic planning for the future by focusing to promote the teaching and learning process.

2. To the English Teachers of the Regular Junior High School and the Open Junior High School

The English teacher must be aware to make a differentiation in teaching English when facing the students of the Regular Junior High School and the Open Junior High School. When the teacher teaches English in the Open Junior High School he must be able to promote the student's motivation better than of the students of the regular Junior High School to increase their English learning achievement.

3. To the Regular Junior High School Students

The students must promote their English learning achievement by studying harder to increase their NEM by making daily planning to study English regularly, taking an English Course, etc.

4. To the Open Junior High School Students

The students must promote their own motivation to study English in order to study harder to increase their NEM, i.e. by put in mind that they could work abroad if they could master the English
language. It will automatically promote their English learning achievement (NEM).

5. To the Other Researchers

This research is focused only to the comparison of the English achievement for the Regular Junior High School students and the Open Junior High School students. It is advisable for the other researchers to investigate the factors that influenced the lower English achievement of the Open Junior High School students.


Soejono (1982). *A Study on the Relevance on Objectives of the Educational System of SMP Terbuka to People’s Wants and Needs for
**Education at Adiwerna, in Tegal, Central Java (Report of a Post Graduate Project Completed as a Minor Requirement for the Degree of Master of Arts).** Macquarie: University School of Education.


Random Sampling from the Population of 2001

1. SMP 1 Loano
N Populasi/Parameter = 237
Besar Sampel yang ditentukan: 48
Nomor Anggota Populasi yang tertunjuk:
56  138  46  96  188  81  221  80  213  106  185  35  169  65
130  126  159  197  39  180
57  104  72  119  158  181  237  209  64  121  163  74  60  179
16  156  13  146  105  187
50  196  116  86  51  98  21  120

2. SMP 2 Loano
N Populasi/Parameter = 272
Besar Sampel yang ditentukan: 55
Nomor Anggota Populasi yang tertunjuk:
20  50  4  161  201  105  162  22  183  85  90  57  212  111
188  222  257  271  221  171
115  232  34  189  84  253  165  68  172  178  180  76  228  266
103  192  173  226  67  208
249  196  220  44  58  89  153  225  154  71  13  164  175  237
252

3. SMP 1 Bener
N Populasi/Parameter = 181
Besar Sampel yang ditentukan: 37
Nomor Anggota Populasi yang tertunjuk:
106  120  87  7  81  39  49  143  76  174  166  41  138  60
129  69  113  75  176  8
132  107  91  73  24  145  111  171  105  2  3  57  78  13
44  140  23

4. SMP 2 Bener
N Populasi/Parameter = 45
Besar Sampel yang ditentukan: 9
Nomor Anggota Populasi yang tertunjuk:
26  34  35  10  12  28  31  41  8

5. SMP 1 Gebang
N Populasi/Parameter = 324
Besar Sampel yang ditentukan: 65
Nomor Anggota Populasi yang tertunjuk:
231  6 211 220 183 35 159 113 189 233 208 79 77 123
10 310 255 130 104 238
212 142 106 236 135 85 126 192 314 253 254 175 4 95
163 105 279 172 96 29
296 2 194 141 65 181 13 82 249 144 178 107 22 140
187 303 36 294 177 319
19 321 170 39 286

6. SMP BK Loano
N Populasi/Parameter = 115
Besar Sampel yang ditentukan: 23
Nomor Anggota Populasi yang tertunjuk:
  52 35 22 109 13 8 37 97 20 99 82 67 73 9
  6 36 55 34 12 40
  47 50 39

7. SMP Setia Budi
N Populasi/Parameter = 29
Besar Sampel yang ditentukan: 5
Nomor Anggota Populasi yang tertunjuk:
  22 2 21 20 26

8. SMP BK Bener
N Populasi/Parameter = 15
Besar Sampel yang ditentukan: 3
Nomor Anggota Populasi yang tertunjuk:
  13 3 11

9. SMP Barata Bener
N Populasi/Parameter = 53
Besar Sampel yang ditentukan: 10
Nomor Anggota Populasi yang tertunjuk:
  19 20 10 25 41 44 16 21 4 5

10. SMP BK Kalijambe
N Populasi/Parameter = 29
Besar Sampel yang ditentukan: 6
Nomor Anggota Populasi yang tertunjuk:
  15 24 2 1 3 12

11. SMP BK Gebang
N Populasi/Parameter = 25
Besar Sampel yang ditentukan: 5
Nomor Anggota Populasi yang tertunjuk:
  2 5 10 4 6

12. SMP BK Seren
N Populasi/Parameter = 105
Besar Sampel yang ditentukan: 21
Nomor Anggota Populasi yang tertunjuk:
  57 84 62 5 6 54 43 55 61 42 17 18 40 32
  75 15 28 68 12 87
  35
13. SMP Islam Berjan
N Populasi/Parameter = 22
Besar Sampel yang ditentukan: 4
Nomor Anggota Populasi yang tertunjuk:
   21   12    4   13

S.P.S : Seri Program Statsitik
Modul : Statistik Deskriptif
Program: Bilangan Random
Edisi : Sutrisno Hadi dan Yuni Pamardiningtih
Universitas Gadjah Mada, Yogyakarta, Indonesia
Versi IBM/IN, Hak Cipta © 2000 dilindungi UU
==============================================
Nama Pemilik : Sarju Alias Sarjuningtyas
Nama Lembaga : UNNES
A l a m a t  : Kedungpucang, Bener, Purworejo.
==========================================

Random Sampling from the Population of 2002
1. SMP 1 Loano
N Populasi/Parameter = 320
Besar Sampel yang ditentukan: 64
Nomor Anggota Populasi yang tertunjuk:
   11  149 317 309 167 259 215 260  89 131 235 175  34  70
   39 243 220 297 308 134
   159 277 133  61  51 103 274  29  49 148 128  57
   72 234 300 286 253 257
   35  76  95  15 271  24  97 179 163 248 247 228 306 294
   84 290  80  68 176 189
   65 113 267  25
2. SMP 2 Loano
N Populasi/Parameter = 258
Besar Sampel yang ditentukan: 52
Nomor Anggota Populasi yang tertunjuk:
   149  21 247  89 200 147  44  10 186  43 213  51 194 188
   128  46  85 222 221  80
   251  181  47 127 117 193  27 246  90 195 126  23 162 103
   235 120  36  72 163 114
   141 214 244 224   8  67 135  39  20 184 219 252
3. SMP 1 Bener
N Populasi/Parameter = 231
Besar Sampel yang ditentukan: 46
Nomor Anggota Populasi yang tertunjuk:
   130  167 200 210 120 183 154 110 151 206 180 131  86 158
   23  31 221  22 118 139
   114 204  43  10 106  91 181  87 132 116  52 212 215  37
   33  29  1 20  16  41
   73  68  85 202 165 189
4. SMP 2 Bener
N Populasi/Parameter = 77
Besar Sampel yang ditentukan: 16
Nomor Anggota Populasi yang tertunjuk:
11 19 13 73 42 77 9 23 17 37 36 20 65 66
21 35
5. SMP 1 Gebang
N Populasi/Parameter = 281
Besar Sampel yang ditentukan: 56
Nomor Anggota Populasi yang tertunjuk:
49 204 186 102 176 215 24 11 165 98 54 4 214 258
255 80 207 154 46 184
278 281 211 242 208 100 62 209 94 118 81 88 26 112
252 191 194 230 163 93
78 85 84 139 99 227 66 220 27 210 143 86 69 170
68 6
6. SMP BK Loano
N Populasi/Parameter = 97
Besar Sampel yang ditentukan: 19
Nomor Anggota Populasi yang tertunjuk:
95 48 86 53 6 4 81 3 73 76 69 54 7 41
2 56 59 77 9
7. SMP Setia Budi
N Populasi/Parameter = 36
Besar Sampel yang ditentukan: 8
Nomor Anggota Populasi yang tertunjuk:
5 25 22 16 6 19 36 9
8. SMP BK Bener
N Populasi/Parameter = 20
Besar Sampel yang ditentukan: 4
Nomor Anggota Populasi yang tertunjuk:
15 11 2 4
9. SMP Barata Bener
N Populasi/Parameter = 63
Besar Sampel yang ditentukan: 12
Nomor Anggota Populasi yang tertunjuk:
19 54 3 55 4 26 28 37 24 62 15 48
10. SMP BK Kalijambe
N Populasi/Parameter = 35
Besar Sampel yang ditentukan: 7
Nomor Anggota Populasi yang tertunjuk:
30 23 12 27 5 17 29
11. SMP BK Gebang
N Populasi/Parameter = 28
Besar Sampel yang ditentukan: 5
Nomor Anggota Populasi yang tertunjuk:
27 10 9 12 11
12. SMP BK Seren
N Populasi/Parameter = 103
Besar Sampel yang ditentukan: 21
Nomor Anggota Populasi yang tertunjuk:
17 103 13 94 96 89 36 21 33 18 1 6 86 93
3 41 91 87 43 72
103

13. SMP Islam Berjan
N Populasi/Parameter = 6
Besar Sampel yang ditentukan: 1
Nomor Anggota Populasi yang tertunjuk:
4

S.P.S : Seri Program Statistik
Modul : Statistik Deskriptif
Program : Bilangan Random
Edisi : Sutrisno Hadi dan Yuni Pamaringningsih
Universitas Gadjah Mada, Yogyakarta, Indonesia
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Random Sampling from the Population of 2003
1. SMP 1 Loano
N Populasi/Parameter = 224
Besar Sampel yang ditentukan: 45
Nomor Anggota Populasi yang tertunjuk:
13 190 102 37 163 34 193 18 42 170 201 151 155 198
180 73 44 195 110 97
1 100 196 210 216 192 162 160 36 181 133 39 81 189
78 10 152 66 48 158
29 106 39 51 21

2. SMP 2 Loano
N Populasi/Parameter = 201
Besar Sampel yang ditentukan: 40
Nomor Anggota Populasi yang tertunjuk:
100 23 41 81 193 108 166 46 74 91 98 77 78 75
38 106 152 25 7 86
124 71 140 186 27 184 117 116 90 89 169 84 73 69
135 187 39 143 12 196

3. SMP 1 Bener
N Populasi/Parameter = 189
Besar Sampel yang ditentukan: 38
Nomor Anggota Populasi yang tertunjuk:
<table>
<thead>
<tr>
<th>No</th>
<th>SMP</th>
<th>N Populasi/Parameter</th>
<th>Besar Sampel yang ditentukan:</th>
<th>Nomor Anggota Populasi yang tertunjuk:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>SMP 2 Bener</td>
<td>65</td>
<td>13</td>
<td>12  64  21  57  24  19  52  7  60  31  65  13  15</td>
</tr>
<tr>
<td>5</td>
<td>SMP 1 Gebang</td>
<td>234</td>
<td>47</td>
<td>114  173  24  82  209  70  153  1  206  116  88  234  54  159  100  103  146  80  58  113  180  136  67  81  226  123  133  165  43  211  207  176  60  184  162  185  179  204  193  115  160  169  96  87  51  216  93</td>
</tr>
<tr>
<td>6</td>
<td>SMP BK Loano</td>
<td>119</td>
<td>24</td>
<td>13  106  109  34  118  81  114  113  61  33  72  32  49  36  75  93  84  45  11  15  23  28  63  17</td>
</tr>
<tr>
<td>7</td>
<td>SMP Setia Budi</td>
<td>33</td>
<td>6</td>
<td>29  26  14  9  10  15</td>
</tr>
<tr>
<td>8</td>
<td>SMP BK Bener</td>
<td>9</td>
<td>2</td>
<td>6  9</td>
</tr>
<tr>
<td>9</td>
<td>SMP Barata Bener</td>
<td>63</td>
<td>12</td>
<td>4  7  18  41  53  44  61  15  38  51  33  22</td>
</tr>
<tr>
<td>10</td>
<td>SMP BK Kalijambe</td>
<td>44</td>
<td>9</td>
<td>1  6  36  2  7  27  29  28  38</td>
</tr>
<tr>
<td>11</td>
<td>SMP BK Gebang</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Besar Sampel yang ditentukan: 4
Nomor Anggota Populasi yang tertunjuk:
  13    8    10    9

12. SMP BK Seren
N Populasi/Parameter = 76
Besar Sampel yang ditentukan: 15
Nomor Anggota Populasi yang tertunjuk:
  38    3    41    21    24    29    34    56    43    64    33    76    42    4    9

13. SMP Islam Berjan
N Populasi/Parameter = 13
Besar Sampel yang ditentukan: 3
Nomor Anggota Populasi yang tertunjuk:
  13    10    4
The Manual Computation of the ‘t’ value of 2000/2001:

\[
\begin{align*}
\sum X & = 1542.33 & \text{OJHS} & = 296.34 \\
N_1 & = 291 & N_2 & = 67 \\
\bar{X}_1 = \frac{\sum X}{N} & = \frac{1542.33}{291} & \bar{X}_2 & = \frac{296.34}{67} \\
& = 5.300103093 & & = 4.422985075 \\
SD_1 & = 0.839143851 & SD_2 & = 0.380474245 \\
(\text{taken from SPSS descriptive statistics computation})
\end{align*}
\]

\[
\begin{align*}
SD_{M1} & = \frac{SD_1}{\sqrt{(N_1 - 1)}} \\
& = \frac{0.839143851}{\sqrt{(291 - 1)}} \\
& = 0.049276223 \\
SD_{M2} & = \frac{SD_2}{\sqrt{(N_2 - 1)}} \\
& = \frac{0.380474245}{\sqrt{(67 - 1)}} \\
& = 0.067981534 \\
SD_{MD} & = \sqrt{(SD_{M1}^2 + SD_{M2}^2)} \\
& = \sqrt{(0.002428146 + 0.002193343)} \\
& = 0.067981534 \\
\frac{\bar{X}_1 - \bar{X}_2}{SD_{MD}} & = \frac{5.300103093 - 4.422985075}{0.067981534} \\
& = 12.90779812
\end{align*}
\]
The Manual Computation of the ‘t’ value of 2001/2002:

\[
\begin{align*}
\sum X & = 1476.43 & 223.92 \\
N_1 & = 311 & N_2 & = 61 \\
\bar{X}_1 = \frac{\sum X}{N} & = \frac{1476.43}{311} & \bar{X}_2 & = \frac{223.92}{61} \\
& = 4.74736344 & & = 3.670819672 \\
SD_1 & = 0.649556767 & SD_2 & = 0.476239768 \\
(taken from SPSS descriptive statistics computation) \\
SDM_1 & = \frac{SD_1}{\sqrt{N_1 - 1}} & = \frac{0.649556767}{\sqrt{311 - 1}} & = 0.036892345 \\
SDM_2 & = \frac{SD_2}{\sqrt{N_2 - 1}} & = \frac{0.476239768}{\sqrt{61 - 1}} & = 0.0061482289 \\
SD_{MD} & = \sqrt{SD_{M1}^2 + SD_{M2}^2} & = \sqrt{0.001361045 + 0.003780071} & = 0.071701582 \\
t_{(stat)} & = \frac{\bar{X}_1 - \bar{X}_2}{SD_{MD}} & = \frac{1.076543}{0.071701582} & = 15.01422482
\end{align*}
\]
The Manual Computation of the ‘t’ value of 2002/2003:

**RJHS** | **OJHS**
---|---
\[ \sum X \] = 1500.69 | 259.45
\[ N_1 \] = 258 | 52
\[ \bar{X}_1 = \frac{\sum X}{N} \] = \[ 1500.69 \] | \[ 259.45 \]
\[ \bar{X}_2 \] = \[ \frac{\sum X}{N} \] = \[ 5.816627907 \] | \[ 4.989423077 \]

\[ SD_1 = 0.883568477 \] | \[ SD_2 = 0.514245739 \]
(taken from SPSS descriptive statistics computation)

\[ SDM_1 = \frac{SD_1}{\sqrt{(N_1 - 1)}} \] = \[ 0.0055115487 \]
\[ SDM_2 = \frac{SD_2}{\sqrt{(N_2 - 1)}} \] = \[ 0.072008783 \]

\[ SD_{MD} = \sqrt{(SD_{M1}^2 + SD_{M2}^2)} \] = \[ 0.08832941 \]

\[ t_{(stat)} = \frac{\bar{X}_1 - \bar{X}_2}{SD_{MD}} \] = \[ 9.364998928 \]

<table>
<thead>
<tr>
<th></th>
<th>RJHS</th>
<th>OJHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>\sum X</td>
<td>4519.45</td>
<td>779.71</td>
</tr>
<tr>
<td>N_1</td>
<td>860</td>
<td>180</td>
</tr>
<tr>
<td>\bar{X}_1 = \frac{\sum X}{N_1}</td>
<td>\frac{4519.45}{860}</td>
<td>\frac{779.71}{180}</td>
</tr>
<tr>
<td></td>
<td>5.255174419</td>
<td>4.331722222</td>
</tr>
<tr>
<td>SD_1</td>
<td>0.901271043</td>
<td>0.694533186</td>
</tr>
</tbody>
</table>

(taken from SPSS descriptive statistics computation)

\[
SDM_1 = \frac{SD_1}{\sqrt{N_1 - 1}} = \frac{0.901271043}{\sqrt{860 - 1}} = 0.030750971
\]

\[
SDM_2 = \frac{SD_2}{\sqrt{N_2 - 1}} = \frac{0.694533186}{\sqrt{180 - 1}} = 0.051911847
\]

\[
SD_{MD} = \sqrt{SDM_1^2 + SDM_2^2} = \sqrt{(0.000945622 + 0.002694839)} = 0.06033624
\]

\[
t_{(stat)} = \frac{\bar{X}_1 - \bar{X}_2}{SD_{MD}} = \frac{0.923452197}{0.06033624} = 15.30510017
\]
Hypothesis Testing of 2001
Nilai t hitung = 12.90779812
Der.Bebas/db = 356
p = 0.00
Kaidah Uji Signifikansi

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<thead>
<tr>
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<th>Kondisi</th>
<th>Nirkonvensional</th>
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<tbody>
<tr>
<td>1) $p &lt; 0.01$</td>
<td>Sangat Signifikan</td>
<td>$p &lt; 0.01$</td>
<td>Sangat Signifikan</td>
</tr>
<tr>
<td>2) $p &lt; 0.05$</td>
<td>Signifikan</td>
<td>$p &lt; 0.05$</td>
<td>Signifikan</td>
</tr>
<tr>
<td>3) $p &gt; 0.05$</td>
<td>Nirsignifikan</td>
<td>$p &lt; 0.15$</td>
<td>Cukup Signifikan</td>
</tr>
<tr>
<td>4)</td>
<td>$p &lt; 0.30$</td>
<td>Kurang Signifikan</td>
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</tr>
<tr>
<td>5)</td>
<td>$p &gt; 0.30$</td>
<td>Nirsignifikan</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis Testing of 2002
Nilai t hitung = 15.01422482
Der.Bebas/db = 370
p = 0.00
Kaidah Uji Signifikansi

<table>
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<tr>
<th>Kondisi</th>
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<th>Nirkonvensional</th>
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Hypothesis Testing of 2003
Nilai t hitung = 9.364998928
Der.Bebas/db = 308
p = 0.00
Kaidah Uji Signifikansi

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<tr>
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<tr>
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<tr>
<td>5)</td>
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Hypothesis Testing of 2001-2003
Nilai t hitung = 15.30510017
Der.Bebas/db = 1038
p = 0.00
Kaidah Uji Signifikansi

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<th>Nirkonvensional</th>
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Kaidah Uji Signifikansi
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