THE CORRELATION BETWEEN FEMALE STUDENTS' LEARNING STYLES AND THEIR ACHIEVEMENT IN ENGLISH AT THE SECOND YEAR OF MADRASAH ALIYAH DINIYAH PUTRI PEKANBARU

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1432 H/2011 M

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Thesis
Submitted to fulfill one of Requirements
for Undergraduate Degree in English Education

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1432 H/2011 M

SUPERVISOR APPROVAL

The thesis entitled *"The Correlation between Female Students' Learning Styles and Their Achievement in English at the Second Year of Madrasah Aliyah Diniyah Putri Pekanbaru"* is written by Rahmawati NIM. 10514000386. It is accepted and approved to be examined in the meeting of the final examination committee of undergraduate degree at Faculty of Education and Teacher Training of State Islamic University of Sultan Syarif Kasim Pekanbaru.

Pekanbaru, 21 Jumadilakhir 1431 H

4th June 2010 M

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EXAMINER APPROVAL

The thesis entitled *"The Correlation between Female Students' Learning Styles and Their Achievement in English at the Second Year of Madrasah Aliyah Diniyah Putri Pekanbaru"* is written by Rahmawati, NIM. 10514000386. It is approved and has been examined by the final examination committee of undergraduate degree on 22nd June 2010/ 10th Rajab 1431H at Faculty of Education and Teacher Training of State Islamic University Sultan Syarif Kasim Riau as one of requirements for Undergraduate degree (S. Pd) in English Education.

Pekanbaru, <u>10 Rajab 1431 H</u>

22 June 2010 M

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ACKNOWLEDGMENT

The greatest gratitude is due to Allah Almighty, the Lord of Universe who has given His blessing and guidance to the writer to accomplish her thesis. Then the writer addresses Prophet Muhammad SAW (Peace be Upon Him). This thesis is written and intended to fulfill one of the requirements for getting an undergraduate Degree in Department of English Education Faculty of Education and Teacher Training of State Islamic University of Sultan Syarif Kasim Riau.

The writer wants to acknowledge and express her sincere gratitude to Allah SWT and to the following people for their valuable contributions:

1. Prof. Dr. H. M. Nazir, as the Rector of State Islamic University Sultan Syarif Kasim Riau.

2. Dr. Hj. Helmiati, M. Ag, as the Dean of Education and Teacher Training Faculty of State Islamic University of Sultan Syarif Kasim Riau for her kindness and encouragement.

3. Dr. Hj. Zulhidah, M. Pd, as the Chief of English Education Department Education of Teacher Training Faculty of State Islamic University of Sultan Syarif Kasim Riau for her kindness, support and encouragement.

4. Drs. Promadi, MA., Ph. D, as the Supervisor of this thesis, who has supervised and given his excellent suggestions and support during the accomplishment of this thesis.

5. All lecturers who have taught and given their knowledge to the writer during her study at English Department of UIN SUSKA Riau.

6. My thanks to my mother, my mother and my mother, Khuzaimah, who always be the best mother ever in the world, my father, Amril, my brother, Amad, Reza, and Arief "Einstein" Rahman for being my inspiration.

7. My big family, my beloved aunt, Hj. Azipar and her late husband (Alm.) H. Tarmizi, Yude Midun, Yandak Muzin, Cik Jul and their family, my Grandparents. Thank a lot for all your support.

8. Special for my beloved, Mas Hari Sopan, who always motivates me to finish this thesis and help me with the statistics. Thank you very much for everything.

9. All my friends in English Education Department, Defri Firmansyah, Ihdiyani Maghfiroh, "the Diva", Arina Syukrina, Nurkhairiyah, Ika Eliska, Meidiana, Andi Azra, Eel and the gank, Mukhlisin, M. Iqbal, and all of the people that I cannot mention one by one, who have given their help, support and valuable input.

Finally, I realize that this thesis is not perfect yet. Therefore, constructive critics, comments and suggestions will be very much appreciated. May Allah Almighty bless us, amin.

Pekanbaru, June 2010
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ABSTRACT

This paper entitled: "*The Correlation between Female Students' Learning Styles and Their Achievement in English at the Second Year of Madrasah Aliyah Diniyah Putri Pekanbaru*"

The aims of this research are; 1) to find out what are female students' sensory learning styles at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru and, 2) to investigate is there any significant correlation between female students' sensory learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru.

The data collection techniques in this research are questionnaire, and documentation. The data of this research are analyzed with autocorrelation and *SPSS 12.0 for Windows.* The data of the questionnaire are analyzed descriptively. The hypothesis is analyzed by using autocorrelation test.

The data analysis shows that majority of female students' at the second year of Madrasah Aliyah Diniyah Putri sensory learning styles is Kinesthetic (59 %), Auditory (22%) and Visual (19%). The hypothesis test shows that there is significant correlation between female students' learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru. The correlation is significant at .05 level of significant. It means that the higher students' learning styles scores, the higher their achievement will be.

ABSTRAK

Rahmawati **"Korelasi antara Gaya Belajar Siswi dan Hasil Belajar Bahasa Inggris Mereka di Kelas Dua Madrasah Aliyah Diniyah Putri Pekanbaru"**

Tujuan dari penelitian ini adalah untuk, 1) Mengetahui apa jenis gaya belajar sensory siswi kelas dua Madrasah Aliyah Diniyah Putri Pekanbaru, dan 2) Mengetahui apakah ada korelasi signifikan antara gaya belajar sensory dan hasil belajar Bahasa Inggris siswi kelas dua Madrasah Aliyah Diniyah Putri Pekanbaru.

Teknik pengumpulan data yang digunakan dalam penelitian ini adalah melalui angket, observasi dan dokumentasi. Data penelitian ini dianalisa dengan menggunakan program *SPSS 12.0 for Windows*. Uji hipotesis dari penelitian ini dilakukan dengan melakukan uji korelasi biserial atau autokorelasi dengan *SPSS 12.0 for Windows*.

Hasil dari analisa data menunjukkan mayoritas siswi kelas dua Madrasah Aliyah Diniyah Putri menunjukkan bahwa gaya belajar sensory mereka adalah Kinesthetic (59%), Auditory (22%) dan Visual (16%). Hasil dari uji hipotesis menunjukkan bahwa terdapat hubungan signifikan antara gaya belajar siswi dengan hasil belajar Bahasa Inggris mereka pada kelas dua Madrasah Aliyah Diniyah Putri Pekanbaru. Korelasi tersebut signifikan pada level signifikansi .05. Hal ini berarti semakin besar nilai siswi dalam gaya belajar mereka, maka akan semakin tinggi pula nilai hasil belajar mereka.

بين دراستهن :
الإنجليزية العالية دينية

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دينية . الدليلي 05. يعني
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CHAPTER I

INTRODUCTION

A. Background

The orientation of learning and education is the students. School and teachers help the students comprehend the lesson. Besides helping the students, the school and the teacher should also be aware of the students' differences in learning such as ways to get and process the information or the lesson. Thus, the teachers could design the instruction of the lesson suitable to the students' preferred ways of learning. The students' awareness about their preference condition to learn also contributes to their achievement in learning and their social lives.

Felder and Brent (2005, p.57) point out that true instruction (teaching) begins when instructors (teachers) understand their students. An important component of that understanding is the awareness of students' differences in attitudes during learning and the different ways to approach it. Felder and Brent (2005) summarize that the more successful teacher aware about their students, the more effectively they can design instruction that benefit all of their students.

Many researchers found that students could adopt information or lesson deeply because the way of learning offered to them relevant to their expectation - the ways of students learn. On the other hand, students should know what and how the best ways for them to learn. So those, students can learn and adopt information easier and maximally, and they can develop their talent and interest into specific abilities.

Understanding about the students' differences in learning and processing the information is beneficial for students. One of the differences of the students in learning is their preference in one of some styles. Brown (2000, p.112) defines style as the consistent and rather enduring tendencies within an individual. Styles can be said as the general

characteristics of intellectual functioning and personality type, that pertain to us as an individual, and that differentiate us from someone else. While strategies, in other hand, refers to specific methods of approaching a problem or task, modes of operation for achieving a particular end, planned designs for controlling and manipulating certain information.

Dunn (in DePorter, 2003, p.110) says that there are many variables that influence someone's way to learn. These factors can be physic, emotion, sociology, and environment of the learners. The way of students in learning is called as learning style. Learning style refers to the variations in students' ability to accumulate as well as assimilate information. Briefly, learning style is the learners' ways to acquire the knowledge, skills, or attitudes through studying or experiencing in specific habitual manners. Reid (in Riazi and Riasati, 2007, p.58) stated that each person may possess a single style or could have a combination of different learning styles. In most cases, the characteristics of learning style can be observed at a relatively young age.

Understanding the learning styles can make the students respond most effectively to the material that is not presented in their preferred ways. The students can use the knowledge of their learning style in order to adjust and be flexible no matter who the instructor is and what the topic might be.

Madden (in Setiawan, 2008, p.3) argued that every student has same potency to be successful in learning. What the students need to do is discovering his or her learning style and preferences.

Dunn (in Taylor and Kennedy, 2008, p.183) distinguish that sensory learning styles of learners or students are divided into three types namely; visual, auditory and kinesthetic. Visual learners typically learn through what they are able to see with their eyes. Visual learners have a tendency to describe everything that they see in terms of

appearances. Visual learners frequently are good writers and will commonly perform quite well on written assignments.

Auditory learners are very good listeners. They tend to absorb information in a more specific manner through sounds, music, discussions, lectures etc. these learners prefer to record lectures so that they can replay them at later time of study purposes. They appreciate books on tape and find that reading aloud helps them to retain information more than written reports. Auditory learners tend to do better on reports and oral presentations.

Kinesthetic learners learn best through body movement such as moving, doing, acting out and touching. Kinesthetic learners tend to become frustrated when they have to sit for long period of time. They enjoy conducting experiments, exploring and performing tasks.

Although everybody has the ability to access all those three styles of learning preference, but most of the people tend to use one style only that plays the role for learning, thinking and communicating.

Erica (2007) says that different gender also effect the ways someone learns. In her research, she found out that male students preferred multimodal instruction, specifically the model VAK (Visual, Auditory, and Kinesthetic), while the female students prefer single-mode instruction with a preference toward K (Kinesthetic).

According to Michael Grinder, the writer of *Righting the Educational Conveyor Belt,* in a group consisting 30 students, there will be 20 students that have the ability to use visual, auditory and kinesthetic styles, therefore they can learn better and more effectively no matter how the lesson is presented. There are about 20 percent of the group prefer single model of learning style that can cause difficulties for their learning if the lessons are not presented on their preferred ways.

Grinder labeled the students whose own only one learning style as visual only (VO), auditory only (AO) and kinesthetic only (KO). In many studies of 'under achiever students' or 'risky students', the findings show that majority of the students who have the risk in learning are the kinesthetic students. The numbers of drop out for kinesthetic students is about 26 percent. (Rose & Nicholl, 2003, p.132)

Pekanbaru is a big city with many schools. One of the schools in Pekanbaru is Madrasah Aliyah Diniyah Putri. This is a special school for female students. This school implements the boarding school system. This school is a private school, under Yayasan Diniyah Putri, and the facilities of this school are sufficient to support the teaching and learning process. This school has some classes, language laboratory, computer laboratory, library and dormitory for the students whose house is far away from the school.

Ideally, the students need to understand their preferred ways of learning the language so that they can respond and adjust to the lesson although it is not taught in their preferred ways of learning. Besides, the teachers should also realize the students' tendencies in learning the language so that they can teach in a way that is appealing to most students and do what works best for them. Brown (2002, in Setiawan 2008, p.8) says that:

> "Successful language learners usually understand their own learning styles and preferences, know which styles help them and use those styles, know which styles might hurt them and change or avoid those styles"

But, in reality, most of the students of Madrasah Aliyah Diniyah Putri do not know the ways to make their potential in learning explored and developed effectively. They do not know what styles that work best for them and what styles that do not effective for them. They do not understand why they can learn one part of the material easily, and why they get difficulties in other parts. Besides, their teachers are still not aware of the ways the students prefer to learn the language. They do not pay much attention on the students'

learning style preference in conducting language learning activities, hence being unable to meet the learning needs of individual students. Students' learning style preference can affect the students' performance and achievement in learning. When the students forced to learn in the ways that do not fit their styles, they will feel frustrated. At school, sometimes mismatches are possible to happen between the teachers' strategies of teaching and the students' style of learning (Madden, 2002, p.131). According to Felder (1996 p.18):

> When the learning styles of most students in class and the teaching style of the teacher are seriously mismatches, the students are likely to become uncomfortable, bored and inattentive in class, do poorly on test, get discouraged about the courses, the curriculum and themselves, and in some cases change to other curricula or drop out of school"

Based on the writer preliminary observation, the writer finds that there is a gap between the theories and the implementation of students' learning styles in learning and teaching process at Madrasah Aliyah Diniyah Putri Pekanbaru. The problems can be seen in some phenomena as follows:

a. Most of the students do not know their own learning styles in learning process.

b. Some of the students do not enjoy the way teacher explains the material.

c. Some of the students become bored in learning and teaching process.

d. Some of the students do not understand their own learning style preference.

e. Most of the students do not know that their learning styles influence their achievement.

f. Most of the students get good score in the examination or the test.

g. Some of the students do not participate in learning and teaching process.

h. Some students feel that learning language is difficult because they do not know how to personalize the instruction.

i. Some of the students do not know how to utilize their ways of learning.

Based on the phenomena above, the writer finds out that it is very important to explore and understand the students' learning style preference in order to make the students perform better in their learning, and to make sure that teaching strategies compatible to the students' learning style preference. Therefore, the writer proposes the research entitled, **"The Correlation Between Female Students' Learning Styles and Their Achievement in English at the Second Year of Madrasah Aliyah Diniyah Putri Pekanbaru".**

B. Problem

1. The Identification of the Problem

Based on the explanation above, the writer identifies the problems of this research into the following:

1. What are the female students' learning styles of the second year of Madrasah Aliyah Diniyah Putri?

2. What are the effective ways to help students discover their preferred way of learning?

3. What can the students do to make their learning process suitable to their learning style?

4. What are the effective ways to help the students use their learning style preference in order to get better score in English?

5. What should teacher do in order to make the students aware of their own learning style preference?

6. What are the effective strategies for the students to avoid mismatches between their learning styles and teacher's teaching strategies?

7. How does female students' learning style preference affect their achievement in English?

2. The Limitation of the Problem

Since the problem is broad enough, it is better for the writer to restrict the problem in order to pay more attention to the specific problems. In this research, the writer focuses on the correlation between the female students' sensory learning styles and their achievement in English through the examination conducted by Madrasah Aliyah Diniyah Putri Pekanbaru. The writer also limited the learning styles based on the students' sensory ways to get and absorb the information, and their ways to organize and use the information. Based on the limitation of the learning style above, the writer will investigate the students' sensory learning styles into three categories, namely; Visual, Auditory, and Kinesthetic and how these styles correlate to their achievement in English examination.

Independent variable or variable X of this research is the female students' sensory learning styles, and dependent variable or variable Y of this research is the female students' English achievement in the examination conducted by the school.

3. The Formulation of the Problem

Referring to the identification of the problems above, the problems of this research can be formulated in the following research question:

1. Is there any significant correlation between the female students' sensory learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru?

C. The Reasons of Choosing the Title

The writer chooses the title because of the following reasons:

1. The problems of the research are very interesting and challenging to be investigated.

2. The topic is relevant to the writer as an English language teacher trainee.

3. As far as the writer is concerned, the topic has not been raised to be a bachelor paper in State Islamic University of Sultan Syarif Kasim Riau.

D. The Objective and Significant of the Research

1. The Objective of the Research

The research is intended to investigate the correlation between female students' learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru

2. The Significance of the Research

The result of this research will give the readers in general, the English teacher and the students in special, the information about female learning styles. It is hoped that the result of this research will help the students be more aware of their learning styles and use their learning style effectively in order to get better result in learning. Then, the result is hoped to be useful for the English teacher to provide the learning instruction and activities that match to the students' learning styles so that the outcome of the education can be improved and developed. Furthermore, by conducting this research, the writer can broaden her knowledge about students' learning styles, the significance and the correlation between students' learning style

and their achievement in English. Finally, the result of this research is expected to be the guidance for those who want to conduct further research under the relevant topic.

E. Definition of the Terms

In order to explain and avoid misunderstanding and misinterpretation about the title and the content of the research, it is better to define the terms that are used in this research as follows:

Learning Styles   Keefe (1979, in Brown 2000, p.114) defines learning styles as a "cognitive, affective, and psychological traits that are relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. Brown (2002, in Setiawan 2008, p.5) says that "learning styles are ways of remembering thoughts and ideas and of practicing skills".

In this research, learning style refers to the sensory learning styles or ways of how a learner perceives the information during learning and teaching process. The sensory styles in this term will be categorized as VAK (Visual, Auditory and Kinesthetic) which seem to be the most popular and easiest model nowadays.

Visual Learners   This term refers to the style of the students who prefer to learn through seeing at visual images such as pictures, chart, diagrams, etc. (Rose 2003, p.130)

Auditory Learners   This term is used to identify the style of the students who prefer to learn through hearing something such as audiocassette, lectures, discussions debate and verbal instructions.

Kinesthetic Learners   It refers to the style of the students where they learn through physical activities or whole body movement and or real life experiences such as touching, moving, in order to absorb and retain materials to be learned.

Achievement   Morgan (1961 in Maisaroh 2006) defines achievement as a powerful motive to accomplish something to succeed at what one undertakes and to avoid failure. Achievement in this research refers to the students' accomplishment on a test of their knowledge and their skills in English.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Theoretical Framework

1. Gender in language Learning

Eric Jensen in his book *Teaching with the Brain in Mind* (2005, p.33-34) divided learning into two broad categories, namely explicit learning and implicit learning. Explicit learning consists of what we commonly read, write, and talk about. It is conveyed by such means as text books, lectures, pictures, and videos. While on the other hand, implicit learning consists of the things that we learn through life experiences, habits, games, experiential learning, and other hands-on activities. It can be said that the students have learned something, if they can identify or predict the relevant associations among variables in the learning situation, predict and express accurately the appropriate concepts or actions, and store, retrieve, and apply that predictions in the future context.

Although learning is a developmental and continual process, no two individuals grasp and perceive reality in the same say. This is because the variety of the experiences of the individual, the way they are influenced by the environmental stimuli and the way they program themselves to transform reality into a learning process. This process is also known as a learning style.

Learning style differs by gender, and there are various results about that, but there is a theme line of this difference by analyzing some

previous research findings. McCullough (2007) in her research argued that males and females students are different in classroom behavior, attitudes toward science, self-variable, and problem solving. In classroom behavior, male students dominate group work; discussions; harassment and teasing; peer culture. Male students tend to monopolize teacher's attention both in positive and negative ways; males graded on content and females graded on appearance or behavior; differential expectations of boys and girls. In solving the problems, a higher problem-solving achievement found among males than among females (Sweeny, 1952; Adigwe, 1992; Casey, 2001 in McCullough, 2007).

The most obvious difference between male and female is the biological difference. However, they are also different in many other factors. The difference in sex between male and female seems to bring some differences in their learning. The difference in ability is important to be examined especially in education field. There are some difference in some specific abilities such as verbal abilities involving vocabulary, and mechanical abilities.

A various research might be to assist the current basis for and validity of teacher's claim that female students are better language learners and to attempt to ascertain whether this superior proficiency (if it exists) is linked particularly to the skill of reading, writing, speaking and listening.

Male and female have their uniqueness and their kept it in their body, their minds, and their brain, their soul and they reflect it with their

attitudes, their behavior and their motivation in learning. We realize that the differences are there, but sometimes we ignore their existence.

In this case, Paplis and Olds (in Hartuti 2007, p.16) stated that the most consistent differences between male and female students is in personality characteristics and emotional adjustment. Girls are more emotional than boys, shows more expression and this pattern exist into adulthood. Girls are generally superior in the verbal items involving vocabulary, memory, and language manipulation. Girls learn a little earlier than boys to talk, to use sentence, and to use greater variety of words. They also speak more clearly, read earlier and consistently better than boys in the test of spelling and grammar.

Table 1

Studies of Differences between Male and Female

Researchers	Research Findings
Bacon (1992)	No differences between sexes
Bacon (1992)	Men use translation strategies more than woman
Bacon and Finnemann (1992)	Female learners of L2 Spanish at university level had the stronger instrumental motivation
Spolsky (1989)	Girls have more positive attitudes towards speakers of the target language
Ludwig (1983)	Male learners are more instrumentally motivated
Gardner and Lambert	Female learners are more motivated than male

(1972)	learners

2. Background of Learning Style

Learning style theories are based on the works of Piaget, Allport, Gullford and Thurson (in Kopsovich, 2001, p.13). The concept of cognitive style did not appear until 1931 in the work of Gordon W. Allport. In the early stage of the terms development, Allport used cognitive style to be a style of behavior, a style of adaptation, a mode of social adaptation and a type of intelligence. Until 1965, when the book *Pattern and Growth Personality* published, Allport clearly delineated cognitive style to be the mental process used by an individual to learn.

The term learning style was used in the 1960's by Frank Riessman. He identified "the style of learning" as "the idiosyncratic style elements in the learning process" (Kopsovich 2001, p.15).

According to Dunn, Dunn and Price (in Kopsovich 2001, p.17), each individual learns through complex set of reactions to varied stimuli, feelings and previously established thought patterns that tend to be present when an individual learns. The learning process is divided into environmental, emotional, sociological and physiological. The major premise of how individual learns, not the skills used in learning becomes the foundation for the Learning Style Inventory.

In this case, Dunn (in Kopsovich 2001, p.16) said that to identify someone's learning style is easier than to explain its existence. Students are affected by their own emotional, sociological, environmental and physical preferences.

Learning is reflective and active, verbal and nonverbal, concrete and abstract. The way an individual perceives reality and reacts to it forms a pattern over time. This pattern dominates the way someone integrated ideas, skills and information about people and the way someone adapts knowledge and forms meaning (Kolb in Kopsovich, 2001, p.23). In order to be success in learning, an individual needs expertise in other learning styles.

Dunn, Greggs and Olson (in Kopsovich 2001, p.24) stated that the belief about learning styles is that individuals vary considerably in how they learn. Individuals possess modality strengths determined by a combination of heredity and environmental influences. These modality strengths, which translate into preference to learn and to communicate visually, orally, spatially, and tactically are one's learning style. Based on the explanation above, it can be said that all styles are different but equal and that intelligence and ability are equally but differentially distributed among human beings.

Learning styles are the key to develop the ability at schools, work places, and in interpersonal situation. Some people learn best if they have the freedom to choose the styles that they prefer, some others will be more

motivated if they can interact with their peers, while the others may consider that the existence of teachers, lecturers, or parents can give effects to their learning (Rose & Nicholl, 2003, p.126).

The Experiential Learning Theory which is historically roots in the work of Kurt Lewin (Kopsovich 2001, p.24) who provided a framework of learning process consistent with how people think, grow, and develop intellectually, psychologically, and physiologically. This experiential learning theory gives a holistic integrative perspective on learning that combines experience, perception, cognition and behavior.

3. **Sensory Learning Styles**

Professor Rita Dun, Ken, the Neuro-linguistic Programmer such as Richard Brandler, John Grinder, and Michael Grinder have identified that there are three different learning and communication styles, namely Visual, Auditory and Kinesthetic (Rose and Nicholl, 2003, p.130).

Table 2

Sensory Learning Styles

Learning Styles	Learn by	Media of Learning
Visual	Seeing and reading	Pictures, videos, graphics, diagrams, charts, models
Auditory	Listening and Speaking	Lecture, recording, storytelling, music, verbalization, questioning
Kinesthetic	Touching and doing	Acting, role-playing, clay

		modeling

Table 2 above shows the distinctive characteristics of those sensory learning styles. Everybody has and can use all of those sensory learning styles. But, most of the people show the preference to one of the styles over the other. A study to over 5,000 students from grade 5th through 12th in America, Hongkong and Japan showed the preference for Visual style 29%, Auditory Style 34%, and Kinesthetic style 37% (Rose and Nicholl, 2003. p. 131).

But, when the students grow up, the preference to visual learning styles dominates most of the students. This is supported by the fact that seventy percents of the sensory receptors are in the eyes (O'Brien in Rose and Nicholl, 2003, p. 131).

a. **Visual learning style**

These students commonly use visual aids, such as graphs and diagrams, to assist them in putting material into perspective. Such visual aids can make it much easier to remember content later than if they had just heard the information.

Visual learners need to see the material in order to understand it. Such learners typically have problems with directions that are spoken and may also have difficulty following lectures or even misinterpret words. Individuals who fall into the visual learning category must process information with their eyes. They learn by reading or

observing and as a result, they are typically good at seeing pictures, people, places and sometimes even words, in their minds (DePotter et.al. 2000, p.85).

They are able to remember how a word looks rather than the sequence of a word or how to sound it out. Visual learners are typically quite good at using graphs and maps and tend to make sure that they have something to read when traveling. They also have productivity for doing a lot of researches before embarking on any trip or major change within their lives. Preferred test styles for visual learners are essays, maps and diagramming. Worst test type for visual learners is listening and responding styles (DePotter & Hernacki, 2003, p.116).

Visual learners tend loves magazines, books and other types of reading materials because they can best recall written information such as graphs, maps, diagrams, chart, highlighted notes, and flashcards. Visual learners feel frustrated when they unable to take notes because they have difficulties in following a long lectures. Visual learners need a quite place to study because they can easily be disturbed by noise. Most of visual learners tend to be good at spelling because they are detail-oriented persons. Besides, visual learners can also demonstrate outstanding photographic memory because they can remember better with visual aids. Visual learners tend to sit at the front row of the classroom because they need to observe the instructors body language

and facial expressions while teaching. They always ask for verbal direction to be repeated (Rose & Nicholl, 2003, p.136).

b. **Auditory learning style**

Auditory or verbal learners are those who prefer to hear materials as they are spoken, such as in a lecture format. These learners commonly find they are best able to recall information after it has been spoken rather than through reading it. Auditory learners prefer the test type such as oral exam and writing responses to lectures. The worst test style for auditory learners is reading comprehension (Lpride, 2008).

Individuals with auditory or verbal learning style typically becomes talkative in classroom because they enjoy debates and discussions, learn most effectively through audio books, lectures, oral presentation and verbal instructions. Auditory learners find out that information is usually has little relevance unless it is heard. They can follow verbal directions better than written ones. They tend to memorize names well and benefit from reading text aloud. Auditory learners also enjoy music and can sing well, but they cannot keep quite for a long period and often food at foreign language because most of auditory learners tend to become articulate speakers (DePotter & Hernacki, 2003, p.118).

c. **Kinesthetic Learning style**

Kinesthetic learning style refers to the ability to absorb information best by experiencing, touching, doing, moving and being active in some manner. Persons who fall into this category prefer situations which are hands-on and which provide them with the opportunity to assemble parts and take part in a physical activity (DePotter & Hernacki, 2003, p.118).

Kinesthetic learners tend to touch or feel. They process information through the sense of touch, such as by feeling shape and textures. While they may take a lot of notes or doodle while attending lectures or even while simply thinking something through, often they will not refer to the notes again (Rose & Nicholl, 2003, p.143).

Learners in this category tend to be quite in touch with their own feelings. When speaking with someone they frequently have tendency to touch the other person on the shoulder or the arm. They may also stand quite close. Kinesthetic learners also usually have tendency to handle something or fidget with something (DePotter et.al, 2000. p.85).

Experiential and hands-on learning activities are usually the best method for this type of learners, such as lab work, role playing and making models. In addition, kinesthetic learners will usually need to take frequent study breaks in order to avoid becoming easily distracted or bored. A computer can also be useful with this learning style, particularly for reinforcing information through the sense of touch.

Within the kinesthetic learning style, there is also a sub-category known as interactive learning. Interactive learners frequently find that they lose attention easily. Like kinesthetic learners, they tend to become distracted or bored very easily within lectures. These individuals often learn best when they are in situations in which they can actually perform or do something. They frequently must re-write notes in their own words in order to recall relevant facts. The best test type for kinesthetic learners is fill in the blank and multiple choices while the worst test type for kinesthetic learners is long essays tests.

Kinesthetic learners often enjoy action, experiences, and discovery because they remember best by manipulating things, concept demonstrations and practices. Kinesthetic learners benefit from role-playing or hand-on teaching situations because they can master the skills through practices and imitation. Kinesthetic learners tend to be weak at spelling but they are good at sports and can play musical instruments. They become restless during long lectures but they can learn best if they are given the freedom to move as they learn (DePotter et.al, 2000, p.116).

2. Areas of Learning-Style Difference Based on Gender

Understanding the difference between male and female students' learning styles gives the awareness for teachers and also students about the strengths and weaknesses of students' ability in acquiring and comprehending the lessons based on their gender. Gurian and Henley

(2000) in their book *Boys and Girls learn differently!* Pointed out the following ten areas of differences in learning between male and female:

a. **Deductive and Inductive**

Females tend to favor inductive thinking, adding more knowledge to their base of conceptualization. They begin with the concrete example that they can see, hear, smell, taste and feel more which help them gather information before making decision. That is why female students are better in essays test than in multiple-choice test. On the other hand, males tend to be deductive in their conceptualization, starting reasoning process from a general principle and applying it. They do deductive reasoning faster than girls do. That is why they do better on fast multiple-choice test (Gurian & Henley 2000, p.44).

b. **Abstract and Concrete Reasoning**

Females tend to find it is difficult to calculate something that they cannot see and touch. Mathematic, for example, will be much easier for female students if it can be out of the abstract world of signs and signifiers, and put into the concrete world.

Males like abstracts arguments, philosophical problems, and morale debates about abstract principles. That is why most of engineer and architecture which rely on the abstract design principles are explored by male brain than female. But, there is always exception in this concept because the researches of brain also recognize a bridge-

brain female when a girl excelling in industrial design with spatial abilities surpass that of many boys.

c. **Use of Language**

Female produces more words than male. Females use words as they learn in a learning process, while boys often work silently. The words used by the males tend to be fewer. Girls tend to prefer having things conceptualized in daily usage language, while boys find that jargon and coded language more interesting.

When male students learn new language, they tend to favor objectivity. They have to learn the rules, fact and logic of the language whereas female students tend to put the priority in the use in their feelings, cultural sensitivity and empathy. On the other hand female use language and learn language for build communications with others not only for speaking competency.

d. **Logic and Evidence**

Girls are better listeners than boys, hear what's said, and more receptive to details in a lesson or conversation. This gave them security in the complex flow of conversation, and thus less need to control conversation with dominance behavior or logical rules.

Male students tend to hear less and more often ask for cleaver evidence to support a teacher's or other's claim. Female students seem to feel safe with less logical sequencing and more instructional meandering.

e. The Likelihood of Boredom

Boys get bored more easily than girls; this quite often requires more and varying stimulants to keep them attentive. Girls are better at self-managing boredom during instruction and all aspects of education.

This has profound impact on all aspects of learning. Once the child has become bored, he is likely not only give up on learning but also act out in such a way that class is disrupted and hi is labeled a behavioral problem.

f. Use of Space

Boys tend to use more space when they learn, especially at young ages. When boy and girl are put together on a table, the boy generally spreads his work into girl's space, not visa versa. Boys tend to learn by using more physical space than girls. This is natural tendency can affect psychosocial dynamics. In fact, they are often just learning in the way their spatial brains learn.

g. Movement

Girls do not need to move around as much while learning. Movement seems to help male not only stimulate their brains but also manage their relief impulsive behavior. Movement also natural to male students in closed space.

Teachers often find that the one or two boys who cannot stop moving in class can be managed by putting them to work, as with letting they hand out papers or go sharpen pencils for the teacher. He is

moving, his brain is being stimulated, he feels comfortable, and no one else is being bothered.

h. Sensitivity and Group Dynamics

Cooperative learning, which is good for all children, is often easier for girls to master in the early stages of its use. Girls learn while attending to a code of social interaction better than boys do.

i. Use of Symbolism

Especially in upper grades, boys tend toward symbolic texts, diagrams, and graphs. They like the coded quality better than girls do, who tend to prefer written texts.

Both girls and boys like pictures, but boys often rely on them in their learning-mainly because they stimulate the right hemisphere of the brain, which is developed rapidly. In literature classes, boys inclined to make a great deal out of the author's symbolism and imagery patterns, while girls prefer to ponder the emotional workings of character.

j. Use of Learning Teams

Learning teams and group working are benefit for male and female students. Male students tend to create structured teams and female students forming looser organizations. Male students spend less time than girls managing team process, picking leaders quickly, and focusing right away on goal orientation.

3. Learning Styles Assessment Instruments

Ellis and Fouts (in Kopsovich 2001, p.27) said that a variety of learning styles assessment instruments exists for children and the adults. The category used in assessments of learning style studies can be seen as follows:

Table 3

Learning Styles Assessment

CATEGORY	CHARACTERISTICS	RESEARCHERS
Cognition – Perceiving, Finding out, Getting information	Sensing /Intuition	Jung, Myers-Briggs
	Field Dependent/Field Independent	Witkin
	Abstract/ Concrete	Grogerc, Kolb and McCarthy
	Visual, Auditory, Kinesthetic, Tactile	Dunn, Dunn and Price
Conceptualization – Thinking, Forming	Extrovert /Introvert	Jung, Myers-Briggs

Ideas, Processing, Memory	Reflective Observation/ Active Experimentation	Kolb and McCarthy
	Random/ Sequential	Groger
Affect – Feeling, Emotional, Response, Motivation, Values, Judgment	Feeler/ Thinker	Jung, Myers-Briggs
	Effect of Temperature, Light, Food, Time of Day, Sound, Design	Dunn, Dunn and Price

4. **Factors That Influence Differences in Learning Style**

Jensen (2005, p.33) argued that most of the educators assumed that if students paid attention, took notes, and did their homework, eventually they would learn. Even though there is some truth to that assumption, but we now know that learning is governed by a more complex set of variables, some of which are the result of nature and others, the result of nurture. The nature influence is actually quite significant: genetic accounts for almost half of all students learning and intelligence.

Guild (2001, p.12) said that if a teacher wants to facilitate successful learning opportunities for all learners, he or she must understand the learner. This also means understanding the innate personality and also cultural values that affect the learner's behavior. The learner is a product of a nature or nurture. All of learners were born with predisposition for learning in certain ways. But, on the same time, the learners are also the product of external influences such as the family, community and culture.

Myers (in Guild 2001, p.12) stated that the researchers confirm that learning patterns are a function of both nature and nurture. He also asserted that the type of development starts at a very early age. Both innate personality traits and the influence of the culture are important in determining one's success in life and will influence how the learning patterns are shaped.

Learning style is not only a psychological trait but also a dynamic state resulting from synergistic transactions between the person and the environment. Thus, there is reason to believe that the differences in cultural socialization tend to influence learning preferences and produce different learning styles

All learning styles can be successful, but they also could become stumbling block when learning style applied inappropriately. This concept explains the success or failure of different learning approaches with different tasks, especially as they relate to expectations in schools (Guild 2009, p.22). Family and teacher (school) culture contribute for

development innate of students learning style hence family as the first culture that adapt by students and school as a institution which has responsibility to give education for students.

There are a number of categories of male-female difference to consider and there are many differences could be presented, but the writer selected those seem most essential in learning. One of the aspects that influence the male and female performance in learning is their brain.

In general, female brains develop faster than male brains. Brains development in infants is often most pronounced in the right hemisphere and gradually moves to the left. In female, the movement the left starts earlier than male (Gurian and Mac Kenney, 2001, p.24-27). Researchers found that males generally have more developed right hemisphere-which disposes them toward spatial task such as map-reading or interpreting technical drawings. Females generally have more developed left hemisphere-which is probably why they learn to speak earlier than males and are often more adapt at languages.

Human beings have large brain which is relative to body weight. William Wankle (in Jensen 2005, p.8) stated that there is a 20 to 40 percent variance among humans. Scientists divided brain areas four lobes, namely the occipital, the temporal, the frontal and parental lobes. The occipital lobe is responsible for vision while the temporal lobe is responsible for hearing, memory and language. The frontal lobe is involved with purposeful activities such as judgment, creativity, problem-

solving, and planning. The parietal lobe's duties include processing higher sensory and language functions. In short, it can be said that different area of the brain plays different functions and effect the way students learn differently (Jensen 2005, p.9).

Human brains have an extraordinary opportunity to become customized by life experiences. The undeveloped brain areas are waiting for signals from the environment to tell them whether they should "set up camp" or wait for further signals. The competition in brain is simple: whatever is first, whatever activities are most frequent, and whatever actions are more coherent will "win" the competition for network wiring and signal the brain to allocate space and resources to that set of behavior (Jensen 2005, p.15).

Learning in ways that are compatible with the way humans naturally function is an approach that will stand the test of time. Developmental and structural differences between male and female give explanation about male and female innate differences. Here they are some parts of brain that show innate differences notably in learning style.

a. **The Developmental and Structural Differences**

In most cases, girls' brain matures earlier than boys (Gurian & Henley, 2000, p.19). In accordance with brain-based research, it is found that girls take in more sensory data than boys. In average, girls hear better, smell better and take in more information though fingertips and skin. Female tend often to be better than males at controlling

impulsive behavior. In other words, girls are by nature less likely to take moral risk than boys.

Girls tend to have better verbal abilities and rely on verbal communication; boys tend to rely on nonverbal communication, being innately less able on average to verbalize feelings and responses as quickly as girls. Males tend to have more development in certain areas of the right hemisphere, which provides them with better spatial abilities such as measuring, mechanical, design, and geography and map reading.

It can be concluded that male and female structure has been designed for different function and abilities. This difference also affects their performance in life.

b. The Hormonal Differences

Human behavior is far more driven by hormones than we have wanted to admit. Male and female mood are very dependent on the interplay of hormones and the brain. Females are dominated by estrogen and progesterone, males by testosterone. Whereas a girl may be likely to bond first and ask questions later, a boy might be aggressive first and asks questions later. This is why most of the teacher finds out that male students are hard to manage than female students in many ways.

c. The Functional Difference

Girls tend to use the left hemisphere. That is why girls respond to a situation more complex than boys. Female brain responds more quickly to greater quantities of sensory information, connecting it with the primacy of personal relationships and communication. Girls and women are able to hear things better than boys and men; sometimes a loud voice is needed for boys. This fact makes an interesting basis for keeping boys near the front of the classroom.

Another difference also occurs in music or choir. Males and female see things differently, with female generally far better at seeing in the dark room. On the other hand, males see well than woman in bright light. This suggests a biological rationale for how teachers should arrange their students in terms of distance or closeness to visual learning aids.

Gender difference has been noted in the memory ability of males and females. Girls can store, for short periods, a greater quantity of random information; boys can do this more often if they can practice it.

5. Advantages of Understanding Learning Styles

There are many advantages of understanding learning style (Ldpride, 2008, p.5). The advantages of understanding learning styles can be seen as follows:

a. Academic Advantages

Understanding learning style can give some academic advantages to the students. They are:

1) Maximizing students' learning potential

2) Being success on all educational levels

3) Understanding how to best study and score better on examination and test

4) Overcoming limitations in the classroom

5) Reducing frustration and stress levels

6) Expanding students existing learning strategies

b. Personal Advantages

For the students, learning style understanding gives personal advantages such as:

1) Improve students' self-confidence and self-esteem

2) Learn how to use the brain best

3) Gain insight into their own strength as well as weaknesses

4) Learn how to enjoy learning

5) Develop a motivation for learning

6) Maximize students' natural abilities and skills

c. Professional Advantage

1) Stay up to date on professional topic

2) Gain an edge over the competition

3) Manage teams in more effective manner

4) Learn how to deliver more effective presentation

5) Improve the benefit

6) Increase earning power

6. Implication of Learning Styles for Language Learning

Price (in Kopsovich 2001, p.39) says that it is advantageous to teach and test students in their own preferred modalities. Brown (2002) stated that learning style is one of the uniqueness owned by individual. There is no good or bad learning styles, there can be a good or bad match between the way students learn best and the ways course is taught. Mismatches occur between the learning styles of students in a language class and instructor's teaching styles, which unfortunately, effects on the quality of students' learning and their attitudes toward the class and the subject. In accordance to this matter, Diaz and Cartnal (1999, p.1) says that:

> "Knowledge of students learning style preferences can aid
>
> faculty in class preparation, designing class delivery
>
> method, choosing appropriate technologies, and developing
>
> sensitivity to differing students learning preferences within
>
> the distance education department"

It can be concluded that teachers need to help the students to be a life-long learners. If the students do not know how to use their innate potential and make their styles match to their learning, they may not be able to be taught and trained in a career that they choose. Understanding

students' learning style especially in language learning is an important factor that contributes many advantages to the students and the teaching process. Teacher can choose and design the material presentation that match to the students' learning style preference and in turn, it will make faster progress and motivate the students in learning.

7. **Characteristics of Good Language Learner**

The process of investigating and studying about language learning strategies has long history. The research about the second language acquisition increased significantly during the 19780s. Researchers and teachers started to realize that no single research finding and method of language teaching would lead in an era of universal success in teaching the language. Certain learners seemed to be successful regardless of method or technique of teaching. Certain people appeared to be blessed with abilities to succeed; other lacked those abilities. Rubin (1975) and Stern (1975) in Brown (2000, p.123) tried to describe "good" language learners in the terms of personal characteristics, styles and strategies. Rubin then summarized fourteen characteristics of good language learners as the people who:

a. Find their own way, taking charge of their learning

b. Organize the information about language

c. Are creative, develop a "feel" for the language by experimenting with its grammar and words

d. Make their own opportunities for practice in using the language inside and outside of the classroom

e. Learn to live with uncertainty but not getting flustered and by continuing to task or listen without understanding every word

f. Use mnemonics and other memory strategies to recall what has been learned.

g. Make errors work for them and not against them

h. Use linguistic knowledge, including knowledge of their first language, in learning a second language.

i. Use contextual cues to help them in comprehension

j. Learn to make intelligent guesses

k. Learn chunks of language as whole and formalized routines to help them perform "beyond their competence"

l. Learn certain tricks that helpful to keep conversation going

m. Learn certain production strategies to fill in gaps in their own competence

n. Learn different styles of speech and writing and learn to vary their language according to the formality of the situation

This list inspired a group of collaborators in Toronto to conduct a study of good learning traits in the middle of 1970s (Naiman et al, 1978 in Brown 2000). The empirical result of the study were disappointing, they nevertheless spurred many other researcher to identify the characteristics

of successful language learners, advice about how to be student of foreign language and how to become better learners.

8. **Concept of Students' Achievement**

Clark (in Maisaroh, 2006) states that students' capability in learning give 70% contribution toward their achievement, while 30% coming from their surroundings. Stern (1983 in Maisaroh, 2006, p.17) says that there are some factors that influence the students' achievement; they are:

a. Characteristics of the learners, such as:

   1) Abilities

   2) Personalities

   3) Attitudes

   4) Motivation

b. Different kinds of learning

c. The learning process

d. Outcomes of the learning.

Slamento (in Maisaroh, 2006, 17) states that students' achievement is influenced the factors as follows:

1. Internal factors

  a. Physical factors such as physical state and condition

  b. Psychological factors such as intelligence, attention, interest, talent and motive.

  c. Exhausted factors

2. External factors

   1) Family factors such as environment, economical conditions

   2) School factors such as teachers' method, curriculum, media, learning methods and homework.

Morgan (1961, in Maisaroh, 2006, p.11) states that achievement is accomplishment on a test or knowledge or skill and also personal motive. In other words, Morgan defines achievement as a powerful motive to accomplish something to succeed at what one undertakes and to avoid failure.

Since the data about the students' achievement in learning English are obtained through the examination conducted by the school, the writer will interpret the students' score or achievement into some measurable categories (Thoha in Maisaroh, 2006, p.24) as follows:

Table 4

The Category of Students' Achievement

Score	Category
82 – 100	Excellent
66 – 81	Good
50 – 65	Fair
0 – 49	Poor

B. Relevant Research

There were many researchers conducted in investigating learning styles and learning styles preferences. Some of them may be seen as follows:

1. Rosalind D. Kopsovich (2001) in her research entitled *"A Study Correlation between learning styles of students and their mathematic scores in the Texas assessment of academic skills test"*. In the analysis of the data, she used the Pearson Product Moment Correlation Coefficient (r) in order to examine the relationships between male and female fifth grade learning style preference and their Texas Assessment of Academic score test in mathematic. She found that there was a correlation at .05 level of significant between female students' learning style preference and their math achievement. She also concluded that there was a difference in math achievement scores of all fifth grade students with different learning styles.

2. Riazi and Riasati (2007) investigated the language learning style preference of Iranian EFL learners, and the degree of the teachers' awareness of them. 219 language learners (121 males and 98 females) from different level of instruction an different age (14 – 44), studying at language institutes took part in their study. The data was obtained through questionnaire and analyzed by using Chi-square test in order to check the significance of the difference between responses. The result of the research showed that students have differences in learning style preference in some areas. It also indicated that teachers are aware of their students' learning

style preferences in some cases, but unaware in others. There needs to be a closer cooperation between teachers and students in some instances.

3. Dodi Setiawan (2008) in his research entitled *"Learning style preference of students at language program of MAN 2 Model Pekanbaru"*. He concluded that most of the students at the second year language program of MAN 2 Model (71.45%) are visual learners based on questionnaire and the observation.

C. Operational Concept

In order to avoid misunderstanding about this study, it is necessary to explain about the variable used in this study. There are two variables; variable X and variable Y. Independent variable of variable X of this study is the female students' learning style preference and the dependent variable or variable Y of this study is the students' achievement in English. As mentioned earlier, this study focuses on the most common learning styles; they are; visual, auditory and kinesthetic. The theoretical concepts of this research explained above are still in general and abstract. They need to be described operationally by particular words or indicators so that they can be measured empirically. Therefore, the operational concept of the independent or variable X of which is female students' learning style preference can be seen as follows:

1. **Visual learners**

Visual learners learn best by using their eyes to take in information.

1. They are neat and orderly

2. They speak quickly

3. They are good long-term planner and organizer

4. They are good spellers and can see the actual words in their mind

5. They remember what was seen rather than heard

6. They memorize by visual association

7. They might forget verbal instruction unless they are written down

8. They would rather read than be read to

9. They doodle during phone conversation and meeting

10. They like demonstrating than speaking

11. They like art more than music

12. They often know what to say but cannot think of the right words

2. **Auditory Learners**

Visual learners are students who comfortable absorbing information which they have heard or discussed.

1. They talk to themselves while working

2. They are easily distracted by noise

3. They might move their lips and pronounce the words as they read

4. They enjoy reading aloud and listening to others reading

5. They can repeat and mimic tone pitch and timbre

6. They find writing is difficult and better at telling

7. They speak in rhythmic patters

8. They are frequently eloquent speakers

9. They like music more than art

10. They learn by listening and remembering what was discussed rather than seen

11. They are talkative, love discussions, and go into lengthy descriptions

12. They can spell better out loud than in writing

3. **Kinesthetic learners**

Kinesthetic learners prefer to learn through practical classes and hands-on activities rather than by reading books and listening to lectures.

1. They speak slowly

2. They touch people to get their attention

3. They stand close when talking to someone

4. They are physically oriented and move a lot

5. They learn by manipulating and doing

6. They memorize by walking and seeing

7. They might use finger as pointer when reading

8. They wave their hands when talking (use gestures a lot)

9. They cannot sit still for long period of time

10. They make decision based on what they feel

11. They tap a pencil, pen or their foot while listening

12. They spend their time for exercises or other physical activities

Since the data about the students' achievement in learning English are obtained through the examination conducted by the school, the writer will interpret the students' score or achievement into some measurable categories (Thoha in Maisaroh, 2006, p.24) as follows:

Table 5

The Category of Students' Achievement

Score	Category
82 - 100	Excellent
66 - 81	Good
50 - 65	Fair
0 - 49	Poor

D. **Assumption and Hypothesis**

a. **Assumption**

The writer assumes that different varieties of learning style preference can give different learning achievement

b. **Hypothesis**

Ho   There is no significant correlation between female students' sensory learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru

Ha   There is significant correlation between female students' sensory

learning styles and their achievement in English at the second year

of Madrasah Aliyah Diniyah Putri Pekanbar

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This research is categorized into correlative research. The purpose of correlative study is to determine the relationship between variables or to use these relationships to make predictions (Gay & Airasian, 2000, p.321). It means that this research is intended to determine the correlation level between female students' learning styles (variable X) and their achievement in English (variable Y) at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru. Then, the data obtained through questionnaire and documentation will be statistically analyzed with *Serial Correlation or Autocorrelation* through *SPSS 12.0 for Windows.*

B. Location and Time of Research

This research was conducted at Madrasah Aliyah Diniyah Putri Pekanbaru which is located on Jalan KH. Ahmad Dahlan No. 100 Pekanbaru in December 2008 up to May 2009.

C. Subject and Object of the Research

1. Subject

The subject of this research was the second year students of Madrasah Aliyah Diniyah Putri Pekanbaru

2. Object

Object of the research was the second year female students' learning styles and its correlation to the students' achievement in English.

D. Population and Sample of the Research

The population of this research was the second year students of Madrasah Aliyah Diniyah Putri Pekanbaru. There were 37 female students in the second year. The Sample for a correlative research is selected by using an acceptable sampling method, and 30 participants are generally considered to be a minimally acceptable sample size (Gay & Airasian, 2000, p.322). It is a small population (N<100), and there is a little point of sampling (Gay & Airasian, 2000, p.134). Regarding to the fact, the writer took all of the population as the sample of this research.

Table 6

The Population and Sample of the Research

Class	Number Of Students
XI IPA	21
XI IPS	16
Total	**37**

E. Data Collection Techniques

In order to collect the data, the writer used the following data collection techniques:

1. Questionnaire

The questionnaire was used in order to find the students learning style preference. It was adopted from DePorter et al., (2003, p. 84 - 85). The questionnaire consisted of 36 questions that ask the students about their learning styles preferences. The distribution of the item on the questionnaire can be seen on the table bellow:

Table 7

Blueprint of the Questionnaire

Type of Questions	Question Number	Total
Visual	1 - 12	12
Auditory	13 - 24	12
Kinesthetic	25 - 36	12
Total		**36**

2. Documentation

Documentation means that the data is obtained by collecting the written archives such as book, documents, journal and so on (Hartono, 2010, p.78). In this research, the data about the students' achievement in English was obtained by having their score for the examination conducted by the school. It is the archive or document of the school. It is why this technique is called as documentation.

F. Data Analysis Techniques

In order to analyze the questionnaire and find out female students' learning style preference, the writer used formula as follows:

$$P = \frac{f}{N} \times 100\%$$

Notation:

P = Percentage of the students classification in major group

f = Total score of respondents classification in each element

N = Total number of respondents

In order to analyze the students' achievement through the score, the writer used the scale as follows:

Excellent   :   82 – 100

Good   :   66 – 81

Fair   :   50 – 65

Poor   :   0 - 49

The writer used *Serial Correlation or Autocorrelation* and also *SPSS 12.0 for Windows* program in order to analyze the correlation between female students' sensory learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru (Hartono, 2006, p.118).

$$r_{ser} = \frac{\sum\{(Or - Or)(M)\}}{SDtot\sum\{\frac{(Or - Or)^2}{P}\}}$$

Notation:

r_{ser} = Serial coefficient correlation between female students' learning styles and their achievement in English.

M   = Mean

O_r = Lower ordinate

O_t = Higher ordinate

SD_{tot} = Standard deviation total

P   = Proportion

XY   = Number of both item score

To determine the correlation between two variables, the following category is used (Sugiyono in Faizal, 2009, p.28)

Table 8

The Interpretation of Correlation Coefficient

Coefficient Interval	Level of Correlation
0.00 – 0.199	Very Low
0.20 – 0.399	Low
0.40 – 0.599	Middle
0.60 – 0.799	Strong
0.80 – 1.00	Very Strong

CHAPTER IV

DATA PRESENTATION AND DATA ANALYSIS

A. DATA PRESENTATION

1. Questionnaire

The data of the questionnaire that has been given to thirty seven of the second year students of Madrasah Aliyah Diniyah Putri Pekanbaru can be seen in appendix 3.

a. Data of Visual Learners

Based on the data of the questionnaire, the students' responses for visual questions can be seen as follows:

Table 9

Visual Style

No	Score	No. of Respondent	Percentage
1	17 - 24	22	59 %
2	9 - 16	15	41 %
3	0 - 8	-	-
Total		37	100%

Table 8 shows that most of students (22%) have high score in visual learners. The rest (15%) have medium score. And no student gets low score.

b. Data of Auditory Learners

The questionnaire consists of 12 questions for auditory learner shows the result as follows:

Table 10

Auditory Style

No	Score	No. of Respondent	Percentage
1	17 - 24	21	57%
2	9 - 16	16	43%
3	0 - 8	-	-
Total		**37**	**100%**

Majority of the students (57%) show good score for auditory styles, while there are also 43% of the students show medium score for auditory learning styles

c. Data of Kinesthetic Learners

Questions 25 through 36 refer to kinesthetic styles. Based on the data collection, the result for kinesthetic style can be seen as follows:

Table 11

Kinesthetic Style

No	Score	No. of Respondent	Percentage
1	17 - 24	30	81 %
2	9 - 16	7	19 %
3	0 - 8	-	-
Total		**37**	**100%**

Table 11 shows that majority of the students (81%) show high score for kinesthetic style. And there are only 19 percent of the students show medium score for kinesthetic style.

2. Recapitulation of the Students' Achievement

Based on the examination conducted by the school for the second year students, the followings are the data of the achievement:

Table 12

Female Students' Achievement

Score	Students	Frequency
82 - 100	-	-
66 - 81	5, 9, 11, 12, 17, 26, 29, 30, 31, 32, 34	11
50 - 65	1, 2, 3, 4, 6, 7, 8, 10, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 33, 35, 36, 37	26
0 - 49	-	-
Total		37

(Source: Archive of Madrasah Aliyah Diniyah Putri Pekanbaru)

Based on the table above, there are 11 students who get the score in the range of 66 – 81, and there are 26 students get the score range of 50 – 65.

B. DATA ANALYSIS

The data analysis techniques for data analysis used in this research to find out "what are female students' learning styles, and there is significant correlation between female students' learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru", the serial correlation or autocorrelation in *SPSS 12.0 for Windows* is used.

Before the data are analyzed with qualitative and quantitative approaches, the data normality and homogeneity are being calculated by using *SPSS 12.0 for Windows* program. The normality and homogeneity of the data can be seen as follows:

A. Normality of the Data

One Sample Kolmogorov-Smirnov is used in order to test whether the sample is in normal, poisson, uniform or exponential distribution. The hypothesis to test the normality of the data can be seen as follows:

H_0 : The data distribution is normal

H_1 : The data distribution is not normal

Level of significance: $\alpha = 0.05$

Table 13
Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Learning Style	37	53.7297	7.22130	36.00	67.00

Table 14
One-Sample Kolmogorov-Smirnov Test

		Learning Style
N		37
Normal Parameters (a, b)	Mean	53.7297
	Std. Deviation	7.22130
Most Extreme Differences	Absolute	.119
	Positive	.054
	Negative	-.119
Kolmogorov-Smirnov Z		.721
Asymp. Sig. (2-tailed)		.675

a Test distribution is Normal.
b Calculated from data.

Based on the output above, it can be seen that sig. = 0.675 that will be compared to the alpha value $\alpha = 0.05$. Therefore, sig. = $0.675 > \alpha = 0.05$ rejects the H_0. The calculation above shows that the distribution of the data is not in poisson distribution. The conclusion is that the average parameter values of 37 female students of Madrasah Aliyah Diniyah Putri are distributed normally.

B. Homogeneity of the Data

Hypothesis:

H0   : The data collected is homogeneous

H1   :   The data collected is not homogenous

Significance level: $\alpha = 0.05$

Table 15
One-Sample Kolmogorov-Smirnov Test 2

		Learning Style
N		37
Uniform Parameters(a,b)	Minimum	36.00
	Maximum	67.00
Most Extreme Differences	Absolute	.274
	Positive	.085
	Negative	-.274
Kolmogorov-Smirnov Z		1.665
Asymp. Sig. (2-tailed)		.008

a Test distribution is Uniform.
b Calculated from data.

Based on the output of *SPSS 12 for Windows* above shows that the value of sig. = 0.08. It will be compared with the value of $\alpha = 0.05$ the conclusion is based on that value.

The value of sig. = 0.08, while the value of $\alpha = 0.05$. It can be seen that sig. = 0.08 > $\alpha = 0.05$. The comparison above rejects the H_0. It can be concluded that the data is homogenous.
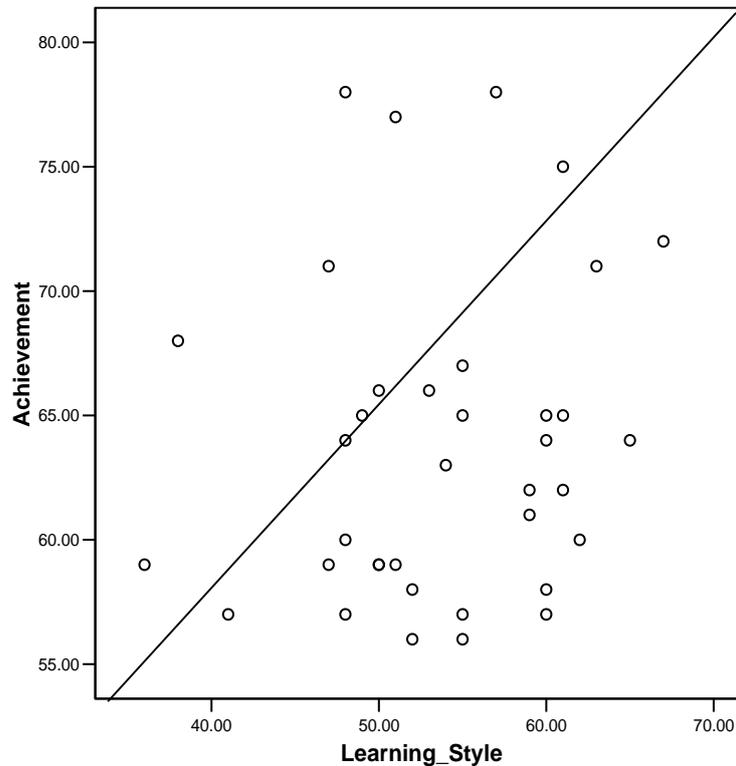
The scatter plot above shows that there is linear relationship between female students' learning styles and their achievement in English.

1. Female Students' Learning Style Preference

As mentioned in the limitation of the problem in chapter I, the aims of this research are to find out what are the female students' sensory learning styles and the level of significant correlation between female students' learning styles and their achievement in English at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru.

In order to answer the first research question, the writer used the descriptive formula to analyze female students' sensory learning styles based on their responses to the questionnaire. The formula can be seen as follows:

$$P = f/N \text{ x } 100\%$$

Notation:

P = Percentage of the students classification in major group

f = Total score of respondents classification in each element

N = Total number of respondents

Table 16

Female Students' Learning Styles

Learning Style	Student	Total
Visual	8, 10, 14, 16, 18, 23, 28	7
Auditory	6, 9, 13, 19, 20, 24, 35, 36	8
Kinesthetic	1, 2, 3, 4, 5, 7, 11, 12, 15, 17, 21, 22, 25, 26, 27, 29, 30, 31, 32, 33, 34, 37	22
TOTAL		37

Table 14 above shows the distribution of female students' learning styles. There are 7 visual learners, 8 auditory learners, and 22 kinesthetic learners.

1. **Visual Learning Style**

   $$\mathbf{P} = f/N \text{ x } 100\%$$

   $$= 7/37 \text{ x } 100\%$$

   $$= 0.16 \text{ x } 100\%$$

   $$= \mathbf{19\%}$$

2. **Auditory Learning Style**

   $$\mathbf{P} = f/N \text{ x } 100\%$$

   $$= 8/37 \text{ x } 100\%$$

   $$= 0.22 \text{ x } 100\%$$

   $$= \mathbf{22\%}$$

3. **Kinesthetic Learning Style**

$$P \quad = f/N \times 100\%$$
$$= 22/37 \times 100\%$$
$$= 0.41 \times 100\%$$
$$= \mathbf{59\%}$$

The calculation shows that 22 students or 59.5% are kinesthetic, 8 students or 22% are auditory and 7 students or 18.9 % are visual. Heller and Steele (2004, p. 55), said that auditory learners are only 20% of the population. Wehrwein (2007) summarized that majority of female students tend to use kinesthetic sensory learning style.

Based on the result of the calculation above, it can be concluded that majority of the second year female students of Madrasah Aliyah Diniyah Putri (59. %) are kinesthetic learners. While 22 % are auditory learners and 19 % are visual learners.

2. Correlation between Female Students' learning Styles and Their Achievement in English

The formula of serial correlation or *autocorrelation* can be seen as follows:

$$r_{ser} = \frac{\sum\{(Or - Or)(M)\}}{SDtot\sum\{\frac{(Or - Or)^2}{P}\}}$$

Notation:

r_{ser} = Serial coefficient correlation between female students' learning styles and their achievement in English.

M	=	Mean
O_r	=	Lower ordinate
O_t	=	Higher ordinate
SD_{tot}	=	Standard deviation total
P	=	Proportion
XY	=	Number of both item score

Before calculating the formula, it is important to recapitulate the variables as follows:

Table 17

The Data of Students' Learning Styles (X) and Achievement (Y)

Student	X	Y

1	50	59
2	61	65
3	55	57
4	48	60
5	47	71
6	52	58
7	60	64
8	48	57
9	53	66
10	61	62
11	67	72
12	63	71
13	48	64
14	60	58
15	50	59
16	62	60
17	51	77
18	54	63
19	59	62
20	55	56
21	51	59
22	65	64
23	49	65
24	59	61
25	60	65
26	57	78
27	36	59
28	41	57
29	55	67
30	38	68
31	50	66
32	61	75
33	55	65
34	48	78
35	47	59
36	52	56
37	60	57
Total	**1988**	**2360**

The next step is to find out the mean scores of each learning styles. The distribution of students' achievement based on their learning styles can be seen as follows:

Table 18

The Mean Scores of Each Style

Statistics	Students' Achievement		
	Students' Learning Styles		
	Visual	Auditory	Kinesthetic
1	57	58	59
2	62	66	65
3	58	64	57
4	60	62	60
5	63	56	71
6	65	61	64
7	57	59	72
8		56	71
9			59
10			77
11			59
12			64
13			65
14			78
15			59
16			67
17			68
18			66
19			75
20			65
21			78
22			57
Tot	**422**	**482**	**1456**
N	**7**	**8**	**22**
P	**0.19**	**0.22**	**0.59**
M	**60.3**	**60.3**	**0.59**

Table 19
Model Summary (b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.152(a)	.023	-.005	6.36229	1.850

a Predictors: (Constant), Learning Style
b Dependent Variable: Achievement

Table 20

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.516	1	33.516	.828	.369(a)
	Residual	1416.754	35	40.479		
	Total	1450.270	36			

a Predictors: (Constant), Learning Style
b Dependent Variable: Achievement

Table 21

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	56.605	7.959		7.112	.000
	Learning Style	.134	.147	.152	.910	.369

a Dependent Variable: Achievement

Table 22

Residuals Statistics (a)

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	61.4148	65.5569	63.7838	.96488	37
Residual	-7.95351	14.98180	.00000	6.27330	37
Std. Predicted Value	-2.455	1.838	.000	1.000	37
Std. Residual	-1.250	2.355	.000	.986	37

a Dependent Variable: Achievement

Correlation test is utilized in order to determine the correlation of

the variables of the research and how significant the correlation is. The

correlation of the variable is tested with *SPSS 12.0 for Windows.* The result of the analysis can be seen in the explanation bellow.

The calculation of correlation between female students' sensory learning Styles and their achievement at the second year of Madrasah Aliyah Diniyah Putri can be analyzed as follows:

Hypothesis:

H_0 : $\mu_1 = \mu_2$

H_1 : μ_1 μ_2

Result of the output:

N : 37

P_{cal} : .000

P : 0.05

Criteria = *Decision*

$P_{cal} < P$ = Reject the null hypothesis

$P_{cal} > P$ = Fail to reject the null hypothesis

H_0 There is no significant correlation between female students' VAK learning style preference and their achievement in English.

H_A There is significant correlation between female students' VAK learning style preference and their achievement in English.

Based on the calculation above, $P_{cal} = 0.000 < P = 0.05$ means that there is significant correlation between female students' sensory learning styles and their achievement in English. The correlation is significant at .05 level of significant. It means that the

higher students' score in the sensory learning styles, the higher their achievement in English will be.

CHAPTER V

CONCLUSION AND SUGGESTION

A. CONCLUSION

Based on the result of the data analysis of the research on the previous chapter, the findings of this research can be concluded as follows:

1. Based on the data analysis of the questionnaire, it can be concluded that majority of female students at the second year of Madrasah Aliyah Diniyah Putri Pekanbaru show their sensory learning styles as follows; Kinesthetic (59 %), Auditory (22 %) and Visual (19 %).

2. Based on the autocorrelation test by using *SPSS 12.0 for Windows*, the result of this research can be concluded that there is significant correlation between female students' sensory learning styles and their achievement in English because $P_{cal} = 0.000$ is smaller than $P = 0.05$. The correlation is significant at .05 level of significant. It can be said that the higher students' score in the sensory learning styles, the higher their achievement in English will be.

B. SUGGESTION

1. Visual

Visual learners need to utilize the diagrams, flow chart, highlighter, and colorful pens for note taking, and they should be able to copy what is on the board. Sitting in the front row can be beneficial for them. They should also be encouraged to ask for verbal instruction when they cannot follow it.

2. Auditory

Auditory learners may be able to benefit by reading aloud when studying, participating in a group-work or classroom discussion, and they should also be able to make rhymes to memorize the names, dates and others facts in learning.

3. **Kinesthetic**

Kinesthetic learners should be able to practice and demonstrate what was taught or learned. They should engage in more hand-on activities, and they will learn a language better if they have the opportunity to drill the words.

4. **Suggestion for the Teachers**

Teachers should help students discover their own learning styles and provide constructive feedbacks about advantages and disadvantages of various styles. Also, teachers should respect the learners' present preferences and encourage their development, provide teaching intervention and activities that are compatible with the ways through which the studen

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