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THE CORRELATION BETWEEN MULTIPLE INTELLIGENCES AND LANGUAGE LEARNING STRATEGIES OF THE ELEVENTH-GRADE STUDENTS AT RIAU VOCATIONAL HIGH SCHOOL FOR INTEGRATED AGRICULTURE

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Abstract

This research aimed to investigate the preferred Multiple Intelligences (MI) and Language Learning Strategies (LLS) used by the eleventh-grade students of Integrated Agriculture Vocational High School. In addition, the researcher also looked for any relationships of each Multiple Intelligence profiles and different use of Language Learning Strategies. The multiple Intelligences questionnaire by Armstrong (2009) was used to identify the dominant intelligence among the students. While Students Inventory Language Learning Strategies (SILL) by Oxford (1990) was administered to know the students' used learning strategies. Fifty-five (55) eleventh-grade students were chosen randomly to participate in this study. The result of the descriptive and inferential analysis showed that all of the students could excel in all types of intelligence at high and medium levels, then language learning strategies were mostly used at high and medium levels and rarely used at a low level. While Pearson Product Moment Correlation analysis revealed that each type of multiple intelligence and language learning strategy was having a significant correlation, as well as Linguistic, Logical, and Musical intelligence, which had medium and low correlations to all types of strategies except social strategy. Similarly, Visual intelligence had a medium and low correlation to all different uses of strategy. Yet, Kinesthetic intelligence only correlated to Memory and Compensation Strategy.

Keywords: multiple intelligences, language learning strategies

Introduction

In today's learning system, English learning activities are no longer referred to as teacher-centered learning. However, it focuses on individualized education, which is student-centered. It is because students are supposed to be responsible for their learning and should be aware of their strengths and weaknesses. Nevertheless, the teacher acting as

a facilitator and a mentor should focus on aspects that could encourage students' ability in learning English, such as recognizing their strengths and weaknesses.

The development of intelligence is no longer a question of how strong or how weak people are, but it is how their intelligence works. That is because the theory is regarded as a pluralistic view of the mind that recognizes many different sides of cognition and cognitive style. Therefore, it is important to acknowledge that every student has different cognitive strengths (Gardner, 2006: 5 cited in Solmundardottir: 2008, 3). It reveals that their abilities, the strategies they used, and the problems and difficulties solved in learning a foreign language would be different. The statement has been supported by Ehrmman, 2003 cited in Shahrokhi, Ketabi & Dehnoo, 2003 which said that one of the issues that can make people different from each other is related to intelligence preferences.

Gardner (1983) formed his thought in his theory of Multiple Intelligences, which stated that there exist eight basic intelligences in each student. Gardner provided a means of grouping abilities that students possess according to their capabilities, into eight comprehensive intelligences: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal and naturalistic (Armstrong 2009: 9). By implying these multiple intelligences, Gardner believes that teachers could teach students in eight ways and students learn in many ways. However, it is not always clear as to how this theory could be used in the classroom to improve the learning of English as a foreign language.

The students' multiple intelligences are important to be more strengthened when students were an early age because it will contribute to their own educational needs (Acikgoz, 2012: 287). As a result, it could change the teacher's and students' perspectives about learning if students' intelligences could be shown which is stronger and weaker. For instance, if a student learns that he is strong in Musical Intelligence but does not excel in Mathematical Intelligence, he can get a whole new perspective on his abilities and change his views about learning. He could practice his stronger intelligence and gain to develop his weaker intelligences in every English learning activity. So, it is necessary for a teacher to have a variety of approaches and activities (Solmundardottir, 2008).

Language learning strategies are important to make learning more effective and self-directed. Therefore, every student should have their strategies in learning a foreign language that they could pass the standard competencies listed in the lesson plan. In line with the statement above, Oxford (1990: 8) states "language learning strategies are specific actions taken by learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and ore transferrable to new situations".

In this time, the theory of multiple intelligences has shown any reflection on the development of the 2013 curriculum. It can be seen at the four main competencies proposed by the government. For core competence 1, students are required to apply a spiritual attitude that reflects Existential Intelligence. It shows development on a vertical dimension of the relationship between students with the almighty God who has created them. For core competence 2, students are required to apply social attitude which reflects on the dimension of Interpersonal and Intrapersonal Intelligence. In the competences, every student requires to have a good attitude on himself and other students. For core competence 3, students are required to comprehend the material as a reflection of Linguistic, Logical-Mathematical, and Musical Intelligence. It requires students to comprehend and analyze the material in factual, conceptual and procedural. For core competence 4, students are required to master the skill that they have learned. It dimensionally relates to students' Visual-Spatial and Bodily-Kinesthetic Intelligence. In this competency, students should be able to express their ideas and thoughts by reasoning, processing, presenting, and creating concretely and abstractedly (Machali, 2014: 36-40).

Riau Vocational High School for Integrated Agriculture is a national school-based on agriculture fields. However, as a formal education, it provides English subject with the

passing score (KKM) 75 for students at the eleventh grade as in the 2013 curriculum requirement. To know whether any problem related to multiple intelligences that exist in the practical field, the researcher did a preliminary study at Riau Vocational High School For Integrated Agriculture. The researcher interviewed one of the English teachers there and found a phenomenon that some students experienced a low score in English subject. It can be seen on 20 students who did not reach the passing score of English subject, while only 15 students who were truly able to pass the passing grade.

Those phenomenon commonly exist in teaching and learning activities in the EFL classroom. It is because the teacher still applied the same teaching methodology and activities when teaching her students. Importantly, the teacher can realize what type of students' intelligence and language learning strategy preferences are in learning English. So that teachers can decide on appropriate and various methodologies so that the strengths keep working while the weaknesses can be enhanced.

In another side of some studies of multiple intelligences, some studies is an old and very controversial issue (Genese: 1976; Harley: 1986 cited in Spolsky: 1989; Skehan: 1980 cited in Skehan; 1989 cited in Filiz: 2010), because many researchers on the previous studies investigated about multiple intelligences were mostly in East Asian Countries such as Turkey (Ikiz & Cakar, 2010; and Filiz, 2010), Iran (Zarei & Mohseni, 2012; Rostami & Soleimani, 2015; Sadeghi & Farzizadeh, 2012; Tajeddin & Chiniforoushan, 2011; Gohar & Sadehgi, 2018; and Ahmadian & Ghasemi, 2017) and Azerbaijan (Esmaeili & Behnam, 2014) and rarely in the South East Asian country especially in Indonesia (Lestari et. al, 2018).

Additionally, most of them have more attention to the student colleges as the participant in their studies (Gohar & Sadeghi, 2018; Rostami & Soleimani, 2015; Sadeghi & Farzizadeh, 2012; Lestari et. al, 2018; and Ahmadian & Ghasemi, 2017) and tend to take some language skills such as writing (Rostami & Soleimani, 2015; Sadeghi & Farzizadeh, 2012; and Esmaeili & Behnam, 2014) and reading (Zarei & Mohseni, 2012; Hajhashemi et. al, 2012; Nasab & Ghafournia, 2016; Sabet, 2016; and Lestari et. all, 2018) and also part of speech such grammar and vocabulary (Tajeddin & Chiniforoushan, 2011; Zarei & Mohseni, 2012; Abbassi et. al, 2018; and Javanmard, 2012) as the dependent variables. Thus, surely, there is a gap in testing the relationship between Multiple Intelligences and Language Learning Strategies in learning English. And, contextually, this research will be conducted in Indonesia and involve vocational high school students as the participants of the study.

Based on the result of the preliminary study on 35 students in the eleventh grade, some problems exist in the learning and teaching process. The students of Riau Vocational High School for Integrated Agriculture did not acquire effectively the objective of teaching English which was stated in the 2013 Curriculum. It was caused by their intelligence or strengths problem in learning and teaching English. The teacher did not seem to put her attention on students' strengths and weaknesses in the learning process so it caused the difficulties to achieve the learning objectives of teaching English. The main aim of this study was to determine the relationship between students' multiple intelligences and their language learning strategies.

Based on the problem mentioned, it was necessary to address some questions on why some of the students do not pass the passing grade in English subject, What factors students do not realize their strengths and weaknesses in themselves, and Why the teacher frequently implements methodology and activities which focus on Linguistic intelligence. The problems are limited to the correlation between students' multiple intelligences and their language learning strategy used in learning English. But, to make this study more

directed and convenient, the researcher limits the number of multiple intelligence types which from the nine of the total number of multiple intelligences, the researcher only involves five types of intelligence. They are Linguistic, Logical-Mathematical, Visual-Spatial, Bodily-Kinesthetic, and Musical Intelligence in this research. Then it will be combined with all types of language learning strategies: Affective, Memory, Social, Compensation, Metacognitive, and Cognitive Strategies.

Furthermore, the problems are formulated on how Multiple Intelligences are, what are Language Learning Strategies at the eleventh-grade students of Riau Vocational High School for Integrated Agriculture, and whether there is any significant correlation between Multiple Intelligence and Language Learning Strategy at the eleventh-grade students of Riau Vocational High School for Integrated Agriculture?

Literature Review

The terms of intelligence have shown many different perceptions among experts. Popularly, it is defined by Bainbridge, 2010 cited in Yaumi and Ibrahim (2013: 9), he defines intelligence as the mental ability to learn and apply knowledge in manipulating the environment and ability to think abstractly. Then, Binet in Indiana (2009) cited in Yaumi and Ibrahim (2013: 10) stated that human intelligence can be defined into three main components. Firstly, intelligence is the ability to direct thought and action. Secondly, intelligence is the ability to change the direction of thoughts and action, and, thirdly, intelligence is the ability to criticize own thoughts and actions. While, according to Chongde and Tsingan, (2003) intelligence is an innate ability of human beings to think, identify, analyze, and solve problems for specific purposes under their management and direction in a particular social-historical and physical context.

The general intelligence means abilities in linguistic and mathematical fields that every student can possess with different levels. However, both abilities are so narrowed because the theory just views that students can possess ability in linguistic and numbers which can be determined by having an IQ test to recognize which students possess higher or lower intelligence. Because of that, Gardner (1999: 54) defines multiple intelligences as bio-psychological potentials or abilities that can process information and can be activated in a cultural setting to solve the problems or create products that are valued in a culture. In line with the statement above, Shearer (2004: 3) added that multiple intelligence is to provide valuable services or teaching. It expands the understanding of intelligence to include divergent thinking and interpersonal expertise. So that intelligence is not something that only happens in someone's head, but it also includes the materials and the values of the situation where and how the thinking occurs. Then, Armstrong (2009: 15) said that in English learning activities, every student can possess the nine types of intelligence: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, naturalistic, and existential intelligence with different level and preferences that can be valuable, activated, developed, or discouraged in the English learning as a foreign language.

In conclusion, multiple intelligences are viewed as a cognitive aspect to solve a problem that exists in English learning that is not only regarded as the linguistic and logical problems but also musical, spatial, etc problems. The nine abilities can be activated by students to be successful in learning English as a foreign language and the abilities can not be tested but it can be observed by using a questionnaire, interviewing with parents

and learners, observing behavior, using data, and using work data to recognize which students possess higher and lower intelligence.

Multiple intelligences have been developed and classified through some researches on biological evolution, neuroscience, anthropology, and psychometric test that aim to avoid the existence of public Judgments. Through scientific research, Gardner (1999: 34) has established nine types of intelligence then the theory has been developed by Armstrong (2009: 6) by considering English learning field on each type of intelligence: Verbal-Linguistic Intelligence, Musical Intelligence, Logical-Mathematical Intelligence, Visual-Spatial Intelligence, Bodily-Kinesthetic Intelligence, Intrapersonal Intelligence, Interpersonal Intelligence, Naturalist Intelligence, and Existential Intelligence.

The first is Verbal-Linguistic Intelligence. According to Armstrong (2009: 6), linguistic intelligence refers to the capacity to use the word effectively, whether orally or in writing. So, it is the most commonly used as students use it in daily communication, whether formal or informal written or spoken. This intelligence includes the ability to manipulate the syntax or structure, phonology or sound, semantics or meaning and pragmatic dimensions or practical use of language. It is involved in any use of metaphors, similes, and analogies, and of course in learning proper grammar and syntax in speaking and writing".

The second is Logical-Mathematical Intelligence. Armstrong (2009, 10) states that logical-mathematical intelligence is and ability to reason, the sequence in terms of cause and effect, create hypotheses statistically, look for conceptual regularities or numerical patterns, solve the problem and have a rational in life. Being able to solve a puzzle, exploring patterns, reasoning and logic are the characteristics of the learners who have this type of intelligence. The teacher can help students to develop this kind of intelligence through a logical presentation that involves using graphs, tables, and timelines and giving some questions such as fill in and fill gaps.

The third is Musical Intelligence. According to Armstrong's (2009: 7), the intelligence of music is almost parallel structurally to linguistic intelligence. Rather, it is possible for to learners in expressing the musical sense orally or singing and in writing or composing sound lyrics. As a whole, this intelligence refers to the capacity to perceive, discriminate, transform, and express musical forms. As a result, the learners who have this type of intelligence have a sensitivity to the rhythm, pitch or melody, and timbre or tone color of a musical piece Students can improve this intelligence through rewriting song lyrics to recognize the concept of syntax or vocabulary and sentence pattern.

The fourth one is Visual-Spatial Intelligence. It is "ability to perceive the visual-spatial representations accurately including the capacity to visualize, to represents visual or spatial ideas geographically, and to orient oneself appropriately in a spatial matrix". It means that learners who exhibit this intelligence tend to own sensitivity towards color, line, shape, form, space, and the relationship among those elements (Armstrong, 2009), and need a mental or physical picture to easily understand information. So that teachers can use mind mapping, visualization activities and provide chances for students to show understanding through drawing to improve students' visual-spatial intelligence as well as.

The five one is Bodily-Kinesthetic Intelligence. It is the ability to solve problems by expressing ideas and feelings in using the whole body and to a facility in using one's hand to produce or transforming things (Armstrong, 2009). Students who are strong in this

intelligence are good at physical activities, hand-eye coordination, and have a tendency to move around, touch things and gesture This intelligence can be enhanced through giving an oral presentation which should involve body movement, using role-play activity, and acting opportunities in drama. Based on the five types of multiple intelligence above (Armstrong, 2009: 6), the researcher wants to correlate the five theories with the six types of language learning strategies that were proposed by Oxford (1990: 37-135) to find out the significant correlation among the variables.

The definitions of language learning strategies have not shown any uniform definitions, it can be seen from some experts which defined language learning strategies from their different views. Wenden and Rubin (1987: 19) define language learning strategies as "any sets of operations, steps, plans, and routines used by learners to facilitate the obtaining storage, retrieval and use of information". While Richards and Platt (1992: 209) say that "learning strategies are intentional behavior and thoughts that learners make use of during learning to help them understand, learn, or remember new information".

Rigney's (1987: 165) statement of learning strategies is "operations used by the learner to facilitate the acquisition, retention, or retrieval of information". Then, O'Malley and Chamot (1990: 1) defined learning strategies as "the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information". Still in the line of the statements above, Cohen (1991: 4) also states that "learning strategies are processed which are consciously selected by learners and which may result in actions taken to enhance the learning or use of a second or foreign language through the storage, retention, recall, and application of information about that language".

Moreover, learning strategies are defined by Oxford (1990: 8) as "specific actions taken by learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to a new situation". This definition shows that the foreign language teaching and learning is focused more on learner-centered rather than teacher-centered, And this situation has brought learning strategies to center attention by some teacher. Based on some explanation by the experts above, it can be summarized that the definition of language learning strategies is all the actions involving behavior, steps, techniques and thoughts of the learners during the language learning to achieve better learning language.

Generally, the types of language learning strategies can be classified into direct and indirect strategies. Direct related to strategy is specific language learning strategies that directly involve the target language. The main feature of all direct strategies is that they require mental processing of the language while each of the three subgroups of direct strategies does this process in its different purposes. Direct strategies are further classified into three groups: Memory Strategies, Cognitive Strategies, and Compensation Strategies. (Oxford, 1990: 37). While indirect strategies can support and manage language learning without directly involving the target language. It is reflected in the features of three subgroups: metacognitive, social and affective strategies (Oxford, 1990: 135).

The first is Memory Strategies**.** It is used for entering information into memory and retrieving it. Memory-related strategies help learners to link one L2 item or concept with another but do not necessarily involve deep understanding. Many memory-related strategies help learners and retrieve information in an orderly string (e.g., acronyms), while other techniques create learning and retrieve via sounds (e.g., rhyming), images

(e.g., a mental picture of the word itself or the meaning of the world), body movement (e.g., total physical response), mechanical means (e.g., the keyword method), or location (e.g., on a page or blackboard) (Oxford, 2003: 13).

She also underlines that memory strategies are often used for memorizing vocabulary and structures in initial stages of language learning, but that learners need such strategies much less when their lexicon and structures have become larger. Although memory strategies can powerfully contribute to language learning, various studies show that rarely language students report using this memory strategy (Oxford, 1990: 40).

The second is cognitive strategies. It is very essential in learning a new language and the most popular strategies found and frequently used by language learners. The common characteristics or features they all have is that they enable the learners to manipulate or transform the target language material indirect ways, e.g., through reasoning, analyzing, note-taking, summarizing, synthesizing, outlining, reorganizing information to develop stronger schemas (knowledge structures), practicing naturalistic settings, structures and sounds formal (Oxford, 2003: 12).

The third is the compensation strategies. It enables learners to use the new language for either comprehension or production despite possible limitations in the information. It helps learners to make up for missing knowledge of vocabulary and grammar, e.g., guessing from the context in listening and reading, using synonym and "talking around" the missing word to aid speaking and writing, and strictly for speaking by using gesture or pause words (Oxford, 2003).

As Oxford (1990) states that compensation is present both in understanding and in producing a new language. These strategies allow learners to produce spoken and written expression in the target language by compensating their lack of knowledge required such vocabulary and grammar. Compensation strategies for production serve as a helper to keep on using the language by obtaining more practice. Besides, some of these strategies help learners become more fluent in their prior knowledge. Additionally, learners who reported using more compensation strategies sometimes communicated better than learners who are not.

The fourth is Metacognitive Strategies. Metacognitive is closely related to beyond, beside, or with the cognitive. It has been supported by Oxford (1990) which defines metacognitive strategies as actions taken by learners to go beyond purely cognitive devices and provide a way to coordinate their learning process including centering, arranging, and evaluating. She believes that these strategies are essential for successful language learning. Importantly, students who sometimes feel overwhelmed by the newness of the target language such as unfamiliar vocabulary, confusing and overlapping rules, different writing systems, etc. need these strategies. Consciously using metacognitive strategies, students can regain their focus by paying attention and linking with already familiar materials.

The fifth one is Affective Strategies. Affective means emotions, attitudes, motivations, and values. Those are important factors in language learning especially in influencing language learning. Success and failure can be seen through the students' feelings in terms of positive and negative. Students who are often to know how to control their emotions and attitudes positively can make learning more successful, effective and enjoyable. Negatively, students can make learning failed and stunted progress if they are

not able to control their emotions and attitudes. Nevertheless, Few studies have examined the frequency of use of affective strategies revealed that these strategies are infrequently used.

The sixth is Social Strategies. It enables learners to work with others and understand the target culture of language learning. Additionally, Oxford (1990) has stated that "language learning is a form of social behavior". It shows any communication in terms of an interaction between and among people. The students' multiple intelligences are measured based on perceptual multiple intelligences by Armstrong (2009) that consist of five types intelligences; linguistic, logical-mathematical, musical, kinesthetic, and visual intelligences. The indicators of perceptual multiple intelligences are;

Table 1. Multiple intelligence indicators

Variable	Indicators
Multiple Intelligences	Linguistic Intelligence (language sensitivity, whether spoken, written or symbolic (sign, body, etc))
	Logical Intelligence (recognition and exploration of patterns and relationship; utilizing, logical procedure, and reasoning)
	Musical Intelligence (musical capacity or appreciation; discern sound patterns)
	Visual Intelligence (three dimensional-visualization of object or materials; orientation, of self, position)
	Kinesthetic Intelligence (control of fine and/gross motor skill)

Students' language learning strategies are measured based on Oxford's (1990) taxonomy. There are two constructs of LLS; direct and indirect strategies. For each construct is divided into some sub-constructs. There are six types of language learning strategies; memory, cognitive, metacognitive, compensation, affective and social strategies. The indicators are presented below:

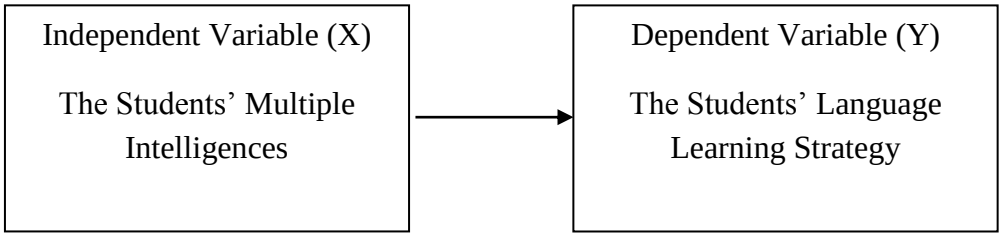
Table 2. Language learning strategy indicators.

Variable	Indicators
Language Learning Strategies	Memory Strategy (store new information and retrieve it later)
	Cognitive (manipulate the language material indirect ways)
	Compensation Strategy (help the learner to complete the issuing knowledge)
	Metacognitive Strategy (manage the language learning)
	Affective Strategy (identify one's mood and anxiety and control emotion)
	Social Strategy (help students work with the target culture as well as the language)

Research Method

The design of this research is correlational research especially explanatory design. It is a correlational design in which the researcher is interested in the extent to which two variables (or more) co-vary, that is, where the changes in one variable are reflected in changes in another one. Creswell (2012: 21) stated that correlational research design is a procedure of quantitative research in which investigators measure the degree of association (relationship) between two or more variables using statistical procedures of statistical analysis. According to Fraenkel and Wallen (2009:11), another type of research is done to determine relationships among two or more variables and to explore their implications for cause and effect, this is called correlational research. While Ary (2006:27) stated correlational research gathers data from individuals on two or more variables and then seeks to determine if the variables are related (correlated). Correlation means the extent to which the two variables vary directly (positive correlation) or inversely (negative correlation). The degree of relationship is expressed as a numeric index called the coefficient of correlation.

From the description above, correlational research can be viewed as a type of non-experimental research method, in which a researcher measures two variables, and understands and assess the statistical relationship between them with no influence from any extraneous variable. There are two variables in this research, independent and dependent variables. The students' multiple intelligences is the independent variable and the dependent variable is the students' language learning strategy used. These variables can be seen as follows:



A sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population. In this research, the researcher took a proportional random sampling technique to select the participants of this study. According to (Usman & Setiady, 2015: 183-185), a proportional random sampling technique is a method of sampling in which the researcher takes a sample from the population that has a different number in subpopulation and then applies random sampling techniques to each subpopulation. He also stated that the minimum percentages of choosing sample in simple random sampling is 10 % of the total population. In choosing the sample the writer took 12 % of the 464 students from the eleventh grade. Finally, the number of the sample for this research was 55 students.

Multiple intelligences questionnaire is taken from Armstrong (2009) to find out the students' multiple intelligences profile. However, it is still a closed questionnaire that has lack detail and there is less scope for respondents to supply answers which reflect their true feeling on each topic. Due to its lack, the researcher modifies it into an open questionnaire as in Likert (1932) scale that consists of five-item choices: Very often, Often, Sometimes, Rarely, and Never. So it enables the respondents to answer in as much detail as they like in their own words. The questionnaire consists of 50 items that cover five types of multiple intelligences and each type of intelligence consisted of 10 statements. In this

questionnaire, students are asked to respond to every item of the questionnaire related to what they are feeling and related to their real lives.

Table 3. MI Questionnaire Items

No	Types of Intelligences	Items
1	PART A : Linguistic Intelligence	1-10
2	PART B : Mathematical Intelligence	11-20
3	PART C : Musical Intelligence	21-30
4	PART D : Visual Intelligence	31-40
5	PART E : Kinesthetic Intelligence	41-50

To score the students' answers, the score of all items in each part is added up to get the total score of each component or part of multiple intelligences. This questionnaire used is a five-point Likert scale as in the table below:

Table 4. The Classification of Students' MI Preferences

Explanation	Score
Very often	5
Often	4
Sometimes	3
Rarely	2
Never	1

(Likert, 1932: 15)

To determine students' language learning strategy used, the researcher takes the Strategy Inventory for Language Learning (SILL) version 7.0. It is proposed by Oxford (1990) that included 50 Likert- type items in six subscales of language learning strategy, i.e. memory, cognitive, compensation, metacognitive, affective, and social strategies. To make the participants understand clearly and thoroughly, the questionnaire is also translated to Bahasa. Below is the taxonomy of the SILL questionnaire.

Table 5. SILL Questionnaire Items

No	Types of Strategies	Items
1	PART A : Memory Strategies	1-9
2	PART B : Cognitive Strategies	10-23
3	PART C : Compensation Strategies	24-29
4	PART D : Metacognitive Strategies	30-38
5	PART E : Affective Strategies	39-44
6	PART F : Social Strategies	45-50

To score the students' answers, there are some steps. They are:

1. Add up all score of each part of the questionnaire
2. The sum of each part is divided by the number of items of each part to get an average score. For example, memory strategies have 9 items, then, the sum score of memory strategy is divided by 9.

3. To get an average score of the overall questionnaire, the sum of six parts is added up then it is divided by 50.
4. This questionnaire used a five-point Likert scale as in the table below:

Table 6. The Classification of Students' LLS Used

Explanation	Score
Always or almost always used	5
Usually used	4
Sometimes used	3
Generally act used	2
Never or rarely used	1

(Likert, 1932: 15)

The data were analyzed using Pearson product-moment correlation analysis because it was used to investigate the possible relationship between different types of Multiple intelligence as the independent variable and different types of Language Learning Strategy as the dependent variable in this study. On the other hand, the data of this study is a normal distribution. The data analyzed is descriptive analysis. Descriptive analysis, according to Creswell (2012), indicates the means, standard deviation, and range score of sores for independent variables (multiple intelligences) and dependent variables (language learning strategies). This technique is used because the data contains an interval scale. Meanwhile, to get easy in analyzing the data, the researcher will use SPSS 25.0 Version program windows. To know the students' multiple intelligences preferred, the researcher summed up the students' responses to each component of multiple intelligences, then the total score of each component is classified into three different levels.

Result And Discussion

Items for variable X are built based on the Multiple Intelligence indicators formulated by Armstrong (2009). It is given to the respondents that have been modified using a Likert scale. While items from variable Y are adopted from Oxford (1990) in the form of a Likert Scale. To make the researcher get easier in collecting the data, both questionnaires are addressed in the form of Google and translated in Indonesian to the respondents. Based on the result of data analysis between variable X and Y using Pearson product-moment correlation shows that there is a significant correlation between Multiple Intelligences and Language Learning Strategies at the eleventh-grade students of Riau Vocational High School for Integrated Agriculture. It can be seen in Table below:

Table 7. The Relationship between Multiple Intelligences and Language Learning

Correlations

		Multiple Intelligences	Language Learning Strategies
Multiple Intelligences	Pearson Correlation	1	.622**
	Sig. (2-tailed)		.000
	N	55	55
Language Learning Strategies	Pearson Correlation	.622**	1
	Sig. (2-tailed)	.000	
	N	55	55

**. Correlation is significant at the 0.01 level (2-tailed).

The table of correlation above describes the correlation between Multiple Intelligences (X) and Language Learning Strategies (Y). Significant value (sig. 2-tailed), the sample (N), and the analyzing technique is using Pearson Product Moment Correlation through SPSS 25.00 windows program. The value of the correlation coefficient (r) of the multiple intelligences and language learning strategies at the eleventh-grade students = 0.622 the sig. (2- tailed) was 0.000 < 0.05. if $r_{observed} < 0.05$, H_a was accepted and H_0 was rejected. It showed that the scores correlate between multiple intelligences and language learning strategies at the eleventh-grade students.

Connected in the table above, it indicated that H_0 was rejected and H_a was accepted. So, it could be concluded that "There is a significant correlation between Multiple Intelligences and Language Learning Strategies at the eleventh-grade students of Riau Vocational High School for Integrated Agriculture. Coefficient correlation in this research in 0.622. It indicates that the correlation is Strong, then the direction is positive. It is proven by the table below:

Table 8. Coefficient Correlation

Coefficient Correlation	Interpretation
0.00-0.199	Very Low
0.20-0.399	Low
0.40-0.599	Medium
0.60-0.799	Strong
0.80-0.100	Very Strong

(Creswell, 2012)

After finding out the correlation between multiple intelligences and language learning strategies at the eleventh-grade students, the researcher finds out any possible relationship between different types of multiple intelligence and language learning strategies. It aims to know whether certain students' preferred multiple intelligences correlate to their language learning strategies used in the classroom. To obtain the result, the researcher analyzed the students' scores of each part of multiple intelligence and language learning strategies using Pearson product-moment correlation assisted by the SPSS 25.00 windows program. The result can be seen at the following table:

To help guide the discussion, through the questionnaire, these five dimensions are provided to show the general picture of students' preferred multiple intelligences and by questionnaire too with six dimensions, the language learning strategies used are revealed. Furthermore, this section aims to generate further insights and interpretations of the finding within the contexts of current and future research in multiple intelligences and language learning strategies of students especially at the eleventh grade of Riau Vocational High School for Integrated Agriculture. The discussion of the findings is presented based on the research.

How are Multiple Intelligences at The Eleventh Grade Students of Riau Vocational High School for Integrated Agriculture? The result of the eleventh-grade students' scores of multiple intelligences analysis showed that most students excel in all types of intelligence. It is proven at the students' mean score after the researcher did the statistical descriptive analysis. The intelligence preferred by the majority of the eleventh-grade students are the first is Kinesthetic intelligence at the mean score 39.87, the second is Musical intelligence at mean score 38.73, the third is Visual intelligence at the mean score 38.55, then the fourth is Linguistic intelligence at the mean score 38.29 and the fifth or the last intelligence preferred by the eleventh-grade students is Logical intelligence at the mean score 37.56. Furthermore, based on the analysis of frequency distribution data toward students' intelligence score reveals that the students possess the intelligence at high and medium level.

How are Language Learning Strategies at The Eleventh Grade Students of Riau Vocational High School for Integrated Agriculture? Based on the statistical descriptive analysis of students' language learning strategies score observed by providing Students Inventory Language Learning Strategies by Oxford (1990), the result showed the strategies that most frequently used are the first is Metacognitive strategy at the mean score 3.464. The second is Social strategy at the mean score of 3.418. The third is the Cognitive strategy at the mean score of 3.402. The fourth is Affective strategy. The fifth strategy is Memory strategy at the mean score of 3.176. And, the sixth or the last strategy the often used by the eleventh-grade students is Compensation strategy. Furthermore, based on the result of frequency distribution data analysis, the majority of students used the strategy at the high and medium level and the minority students used the strategy at a low level.

Is there Any Correlations Between Multiple Intelligences and Language Learning Strategies at The Eleventh Grade Students of Riau Vocational High School for Integrated Agriculture? The questionnaire data analysis showed that there is a positive significant at the high, medium and low correlation between multiple intelligences and language learning strategies at the eleventh-grade students of Riau Vocational High School for Integrated Agriculture. The variety result is evidenced by the result of the coefficient correlation analysis of each type of intelligence and strategy using the Pearson product-moment correlation.

The result showed that there is a positive high and medium correlation between Linguistic intelligence and all types of learning strategy except the Social strategy, as well as the Metacognitive strategy ($r = 0.645$) that showed at the high level. While the Memory strategy ($r = 0.513$), Compensation strategy ($r = 0.557$), Cognitive strategy ($r = 0.579$), and Affective strategy ($r = 0.458$), the correlation showed at the medium level.

Then, there is a positive medium and low correlation between Logical intelligence and all types of learning strategy except the Social strategy, as well as the Memory strategy ($r = 0.489$), Cognitive strategy ($r = 0.409$), and Compensation strategy ($r = 0.419$)

that showed at the medium level. While the Metacognitive strategy (r = 0.365) and Affective strategy (r = 0.267), the correlation showed at the low level.

The same finding is also found between Musical intelligence and all types of learning strategy still, no correlation exists at the Social strategy. Musical intelligence medially correlates to the Compensation strategy (r = 0.441) and Metacognitive strategy (r = 0.419). While, the correlation lowly finds at the Memory strategy (r = 0.368), Affective strategy (r = 0.376), and Cognitive strategy (r = 0.374). Differently, Visual intelligence showed a positive medium and low correlation to all types of learning strategy, as well as the Memory strategy (r = 0.491), Cognitive strategy (r = 0.509), and Metacognitive strategy (r = 0.433) that showed at the medium level. While at the low correlation levels are found at the Memory strategy (r = 0.431), Social strategy (0.321), and Affective strategy (r = 0.306). And, Kinesthetic intelligence showed a positive medium and low correlation only to the Memory strategy (r = 0.431) that correlates at the medium level and Compensation strategy (r = 0.327) that correlates at the low level.

In line with the result above, the result is not overall corresponding to Akbari and Hosseini (2008) cited in Hajhashemi, et al (2013) who said that any aspect of multiple intelligences corresponds to a certain aspect of language learning strategies used, such as in communication skill, the students need linguistic intelligence and Social strategy, but this research does not show any positive correlation between both components, and in general cognitive, students need logical intelligence and Cognitive strategy, so it indicates the result is a bit corresponding to this statement that most students who preferred in Logical intelligence used Cognitive strategy. Also, perceiving intelligence as an ability to solve the problem, it can be assumed that multiple intelligences and language learning strategies are of the same nature: students dealing with the perception of the problem at a broad level in terms of their intelligences preferred and other tackling learning problems in terms of their language learning strategies used and the ways to face the encountered problems.

These results also support the findings of Akbari and Hosseini (2008) that did a possible relationship study of multiple intelligences and language learning strategies of English major university students at BA and postgraduate levels where English is as their foreign language. The findings showed that overall multiple intelligences types significantly correlated to all types of learning strategies, but did not significantly correlate to Social strategy. The fact that Linguistic intelligence did not correlate with Social learning strategy was a bit of surprise since the communicative aspects of language use require knowledge of the social potential of language and the way social connections could facilitate language development.

In line with the statement above, any different findings are revealed as intelligence is something that can be possessed by every student with their different weaknesses and strengths. Different findings as researched by Roohani and Rabiei (2013), the study of exploring language learning strategy use with the role of multiple intelligences, second language proficiency, and gender. The findings showed that there was a significant correlation between all types of intelligence and strategy, yet the significant correlations were at the medium and low levels.

Conclusion

Based on the research findings through a multiple intelligences questionnaire to determine students' preferred multiple intelligences and Students Inventory Language Learning Strategies to determine strategies used by the eleventh-grade students prove that

all types of intelligence preferred at the high and medium level with the mean score 38 and language learning strategies are used at the high and medium level for the majority students and the low level for the minority students with the mean score 3.4.

Furthermore, there is a significant correlation between the components of multiple intelligence and language learning strategies that showed at the high, medium and low levels. It can be seen from the Linguistic, Logical, and Musical intelligence which correlate to all types of strategy except Social strategy, while Visual intelligence correlates to all types of strategy and Kinesthetic intelligence only shows correlations to Memory and Compensation strategy.

Based on the finding of this study, some recommendations are useful for teachers, students, and future researchers. For students, this would be an important point of recognizing the strong intelligence and strategies used while learning English. These strong intelligences could be activated in the classroom and create opportunities to have many passions in life. While these reveals of language learning strategy would be one of the ways to improve English learning in the classroom. The next for the teacher, the teacher are advised to have a teaching process that considers students' strengths and weaknesses. It should be manifested at using different teaching materials, strategies and methodologies to meet students' needs.

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