THE CORRELATION BETWEEN STUDENTS' CHRONOTYPE AND MOTIVATION IN LEARNING ENGLISH

THESIS

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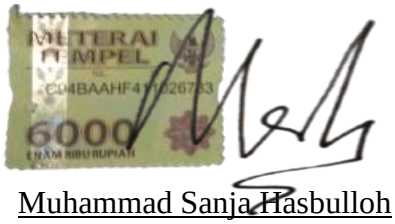

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ABSTRACT

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Key Words: *Chronotype, Students' Motivation, English language learning.*

The chronotype is a circadian clock type or feeling preference best in the morning type or night type conditions. A chronotype link with learning is a chronotype control where students are in the wrong type of chronotype, it will affect whether or not the learning process is smooth and vice versa. The level of motivation is chanted that it can help students to control the chronotype of students to learn English. This research is quantitative research, especially correlational research. Among them, Likert scale data is carried out using a questionnaire. The sample in this study were students of UINSA semester 2 in the Spoken English course. In this study, the majority of selected participants had criteria of adolescents and adults between 17 and 20. The chronotype type output of the students shows the numbers (67%) for the morning type. Accompanied by several morning type students who could not control the chronotype due to low motivation (5%). For the night type, it is (33%) but among those who have the night type, there are also (62.5%) who are motivated and can control their chronotype when studying in the morning or evening where they don't have the best feelings. There are also students who choose between low and high, namely moderate (32.5%). The two results of the variables owned by this study produce a total score obtained from the significance value of the Spearman correlation in the findings of this study which is (0.645 which indicates that there is no correlation with the direction of the negative coefficient, namely (-0.075). It can be interpreted in the Spearman correlation reference that the variables have no total correlation. Thus, the alternative hypothesis (H1) which states that there is a relationship between the chronotype and students' motivation to learn English, has not been achieved. This study focuses on knowing the type of chronotype of students, the level of student motivation and the level of correlation in the two.

ABSTRAK

Hasbulloh, Sanja (2021). *The correlation between Students' Chronotype and Motivation in Learning English*. Skripsi, Prodi Pendidikan Bahasa Inggris, Fakultas Tarbiyah dan Keguruan, UIN Sunan Ampel Surabaya. **Pembimbing: Rizka Safriyani, M.Pd., Dr. Siti Asmiyah, M.TESOL**.

Key Words: *Kronotipe, Motivasi Siswa, Belajar Bahasa Inggris.*

Kronotipe adalah tipe jam sirkadian atau preferensi perasaan yang paling baik dalam kondisi tipe pagi atau malam. Hubungan kronotipe dengan pembelajaran merupakan kontrol kronotipe dimana siswa berada pada tipe kronotipe yang salah, hal ini akan mempengaruhi lancar tidaknya proses pembelajaran dan sebaliknya. Tingkat motivasi yang dilantunkan dapat membantu siswa untuk mengontrol kronotipe siswa dalam belajar bahasa Inggris. Penelitian ini merupakan penelitian kuantitatif, khususnya penelitian korelasional. Diantaranya, data skala likert dilakukan dengan menggunakan kuesioner. Sampel dalam penelitian ini adalah mahasiswa UINSA semester 2 mata kuliah Bahasa Inggris Lisan. Dalam penelitian ini, sebagian besar partisipan yang terpilih memiliki kriteria remaja dan dewasa berusia antara 17-20 tahun. Output tipe kronotipe siswa menunjukkan angka (67%) untuk tipe pagi. Ditemani beberapa siswa tipe pagi yang tidak bisa mengontrol kronotipe karena motivasi rendah (5%). Untuk tipe malam memang (33%) tetapi diantara mereka yang memiliki tipe malam, ada juga (62,5%) yang termotivasi dan bisa mengontrol kronotipe mereka saat belajar di pagi atau sore hari dimana mereka tidak memiliki yang terbaik. perasaan. Ada juga siswa yang memilih antara rendah dan tinggi yaitu sedang (32,5%). Kedua hasil variabel yang dimiliki oleh penelitian ini menghasilkan skor total yang diperoleh dari nilai signifikansi korelasi Spearman pada temuan penelitian ini yaitu (0,645 yang menunjukkan bahwa tidak terdapat korelasi dengan arah koefisien negatif yaitu (Dalam referensi korelasi Spearman dapat diartikan bahwa variabel tidak mempunyai korelasi total, sehingga hipotesis alternatif (H1) yang menyatakan bahwa ada hubungan kronotipe dengan motivasi belajar bahasa Inggris siswa belum terbukti. Penelitian ini berfokus pada mengetahui jenis kronotipe siswa, tingkat motivasi siswa dan tingkat korelasi keduanya.

TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF APPENDICES

LIST OF ABBREVIATION

1. **UINSA** : Universitas Islam Negeri Surabaya
2. **MEQ** : Morningness-Eveningness Questionnaire
3. **DF** : Degree of Freedom
4. **CGPA** : Cumulative Grade Point Average

CHAPTER I

INTRODUCTION

The opening chapter, namely the first chapter addresses the current issues regarding the field of students' chronotype and students' motivation to learn English that loaded in some headings: (1) background of study, (2) research questions, (3) objectives of the study, (4) Hypothesis, (5) significance of the study, (6) scope and limitation of the study, (7) definition of key terms.

A. Background of the Study

Chronotype points to individual preferences in choosing hours of sleep, peak time preferences of each individual, divided into types of morning or night as said by Roenneberg et.al.[1] Chronotype classification is divided into two types, namely morning and evening. In general, on the contents of the Horne's research said that individual differences in circadian rhythms were reviewed, especially morning and night.[2] Types of alleged morning tend to be active at 1:00 a.m. to 10:00 a.m. and types of alleged nights tend to be active at 11:00 a.m. until late afternoon or night. Meanwhile, someone with the type of night will sleep and wake up-later. Deborah affirms that the chronotype cannot be separated from human biological clocks that are controlled by circadian rhythms - the physical, mental, and behavioral changes that follow a daily

[1] Till Roenneberg, Anna Wirz-Justice, and Martha Merrow, "'Life between Clocks: Daily Temporal Patterns of Human Chronotypes,'" 18, no. 1 (February 2003): 80–90.
[2] James A. Horne and Olov Östberg, "Individual Differences in Human Circadian Rhythms," *Biological Psychology* 5, no. 3 (September 1977): 179–190.

cycle in their daily lives while working, playing or studying.[3] Also, Cavalerra and Giudici stated person's daily cycle is usually close to 24 hours.[4] Broadly individual differences in circadian rhythms, generally called by the name of morning type and night type, as well as activities that are exposed and refer to the best feeling in the individual's body at a certain time such as in the morning or evening. Including their learning activities particularly in English subject.

The relationship between chronotype and learning activities has been explored in previous studies. Roeser et al. have investigated the relationship between chronotype, motivation to learn, sleepiness and school performance. They found no direct effect of the chronotype on school performance and they deduced that the chronotype tends to influence school performance in the type of night by choosing early hours of sleep and reducing excessive learning[5]. In smoother with this study, Escribano and Díaz-Morales also found that the morning type showed positive results in learning activities[6]. As for the results of research outside of Díaz and Sánchez learning theme, it states that the morning chronotype relatively more able to set the time and timely reference to

[3] Deborah Weatherspoon Amber Erickson Gabbey and RaAmber Erickson Gabbey and Rachel Nallchel Nall PhD, RN, CRNA, COI, "What Are Biological Rhythms?," *healthline*, last modified November 4, 2016, accessed November 26, 2019, https://www.healthline.com/health/biological-rhythms.

[4] Cavallera, G. M., and Giudici, S., "Morningness and Eveningness Personality: A Survey in Literature from 1995 up till 2006," *January 2008* 44, no. 1 (n.d.): 3–21.

[5] Roeser , K., Schlarb, A. A., & Kübler, A., "The Chronotype Academic Performance Model (CAM): Daytime Sleepiness and Learning Motivation Link Chronotype and School Performance in Adolescents," *2013* 54 (n.d.): 836–840.

[6] Escribano, C., & Díaz-Morales, J. F., "Are Achievement Goals Different among Morning and Evening-Type Adolescents?," *2016* 88 (n.d.): 57–61.

external hours, healthier lifestyle behavior than the night type.[7] On the contrary, other associations were also found to be stronger in the type of night. Deary, Strand, Smith, and Fernandes[8] claimed that motivation to learn is high in themselves includes intelligence, academic motivation and awareness as factors that could mediated the chronotype on grades such as individual characteristics that were relevant to reach the good grades. Their findings highlight the strong relationship between student chronotype and student motivation to learn English.

The phenomenon that is heard, those who are motivated by high learning are sometimes disrupted by activities outside the school such as the environment and life activities that change over time such as social jetlag is associated with a chronic sleep deprivation condition that is also involved with early school hours and slow onset of sleep in the results of investigations from Wittmann et al.[9] The impact is, if it is not appropriate in regulating their sleep hours, there is a mismatch between internal and external timing (social jetlag/sleep problems) significantly compromises health and well-being in cognitive and academic performance as it stated by Roenneberg et al.[10] According to Guyton and Hall Sleep is a natural phenomenon and is also a physiological need for every human being and is closely related to circadian

[7] Juan Francisco Díaz-Morales and Ma. Pilar Sánchez-López, "Morningness-Eveningness and Anxiety among Adults: A Matter of Sex/Gender?," *Personality and Individual Differences* 44, no. 6 (April 2008): 1391–1401.

[8] Deary, I. J., Strand, S., Smith, P., & Fernandes, C. 2007. Intelligence and educational achievement. Intelligence, 35, 13–21. https://doi.org/10.1016/j.intell.2006.02.001.

[9] Marc Wittmann et al., "Social Jetlag: Misalignment of Biological and Social Time," *Chronobiology International* 23, no. 1–2 (January 2006): 497–509.

[10] Roenneberg T, Allebrandt KV, Merrow M, and Vetter C, 2012, Social jetlag and obesity. Curr Biol 22:939-943.

rhythms.[11] In addition, denied by Kanazawa and Perina, those who have high learning motivation are their IQs sufficient. Students have IQ variants. Verbal intelligence quotient (IQ) scores during adolescence are presented as predictors of circadian preference, with students who are more intelligent choosing night as an adult.[12] Although the context of school performance is inputted by the study of Goldstein, Hahn, Hasher, Wiprzycka and Zelazo specifically the relationship between chronotype and intelligence, taking into account time of the day has been investigated.[13] Sometimes there is synchronization with better performance at times that matches individual preferences.

Nevertheless, motivation becomes important in English learning because motivation importantly participated in the role of learning process, including (a) determining the things that can be used as learning reinforcement, (b) justifying the learning objectives to be achieved, (c) binding various constraints on learning stimuli, (d) binding on learning perseverance that has been asserted by Uno.[14] Three elements related to motivation stated by Gardner include effort (efforts to learn language), desire (want to achieve goals) and positive influence (enjoy language learning tasks).[15] Another study by Al-Tamimi, et.al showed that petroleum students in Yemen proved to be

[11] Guyton, Hall, *Buku Ajar Fisiologi Kedokteran*, Edisi 9. Jakarta: EGC, 1997.
[12] Kanazawa, S., & Perina, K.,2009, "Why Night Owls Are More Intelligent" 47, no. 7 (n.d.): 685–690.
[13] Goldstein, D., Hahn, C. S., Hasher, L., Wiprzycka, U. J., & Zelazo, P. D., "Time of Day, Intellectual Performance, and Behavioral Problems in Morning versus Evening Type Adolescents: Is There a Synchrony Effect?" 42 (2007): 431 440.
[14] Hamzah B. Uno, M., *Teori Motivasi Dan Pengukurannya* (Jakarta: PT Bumi Aksara., 2010).
[15] Gardner, R. C., "Integrative Motivation and Second Language Acquisition. In Z. Dörnyei, & R. Schmidt (Eds.)," Motivation and Second Language Acquisition. Hawaii: University of Hawaii Press. (2001): 1–19.

functionally motivated to learn English because of academic and work demands. So that the students at this school have a great desire to learn English because they wanted to graduate form an English course and also because English language skills helps them in their careers.[16] Further, Roenneberg et al. said that the chronotype expressed as a continuous variable e.g., Munich ChronoType Questionnaire (MCTQ) or as a categorical variable.[17] Other, Morningness-Eveningness Questionnaire (MEQ) by Horne and Ostberg.[18] Therefore, it is important to be learned because researcher assumes that chronotype does influence student learning motivation, which can also occur in English lessons. It is pursued that motivation is essentially thick in learning English because motivation plays an important role in the learning process, including ensured the things that could be used as learning reinforcements, justify the learning objectives to be achieved, determining various obstacles to learning stimuli, determine perseverance in learning.

From phenomena with varying results, various assumptions also have led the researcher to tell how the phenomena have been encountered by researchers. In the campus area, especially at UINSA where researchers are also students and researcher there. It was told that state-based campuses generally only have a schedule from the morning to the afternoon. From there, the researcher found in his view that some students did not really participate in

[16] Al-Tamimi, Atef., Shuib, Munir., "'Motivation and Attitutes Towards Learning English: A Study of Petroleum Engineering Undergraduates at Hadhramout University of Sciences and Technology'.," *2009* 9, no. 2 (n.d.).
[17] Till Roenneberg, Anna Wirz-Justice, and Martha Merrow, "Life between Clocks: Daily Temporal Patterns of Human Chronotypes," *Journal of Biological Rhythms* 18, no. 1 (February 2003): 80–90.
[18] Horne, J. A., & Östberg, O, "A Self-Assessment Questionnaire to Determine Morningness-Eveningness in Human Circadian Rhythms," *1976* 4 (n.d.): 97–110.

learning activities by reason of being sleepy in the morning and still weak in the first hour, while after a few hours and still with the sleepy student, these students had started to participate in learning activities in total after there on learning in the afternoon hours. On the other hand, some students felt drowsiness but they tried to overcome it by doing ablution first and drinking coffee. This also encourages researchers to ask these students whether there are factors that encourage students to fight drowsiness in order to participate in English learning activities. The answer from the contradiction of sleepiness stated that the student had the motivation, including wanting to have the correct understanding and high scores. If it is related to the relationship between chronotype type and motivation, the researcher wants to embrace and investigate the phenomenon in the research area with the Horne theory to find the chronotype type of students and measure the level of motivation of students learning English by adopting Gardner's theory. In the end, student chronotype preference data and student motivation level data will be correlated with the appropriate formula for the type of data adopted. If the correlation results are positive, self-control on the chronotype of students' needs to be given appropriate effort. Moreover, could be resist any effects such as drowsiness and passing comprehension of learning, disorganization of the body if not managed properly and so on.

While a series of studies have shown different techniques, diverse participants, focus on school performance, school performance, the relationship of student IQ and different research subjects and objectives. Among them focus

on subjects other than English such as Spanish, Turkish and related to all subjects in school. There has been a discussion dealing with the types of human biological Rhythmic variation. However, the phenomenon needs a further investigation to find out only specific focused on the EFL classroom. This study is measuring the correlation between chronotype preference and student motivation. Obviously, previous studies had participants coming from students with their first language and second language while this study was looking for English as a foreign language. Researcher assuming this study is able to propose the consideration of students' preferences in chronotype and their motivation in learning English. In order to inspire students to be more caring and careful to determine their chronotype and their learning motivation. Furthermore, there are no parties that have been harmed because of the wrong chronotype or less Motivation in learning English. Then, the students reached their successful learning no matter what is in their chronotype and motivation in learning English.

B. Research Questions

Based on the background above, it needs to be analyzed for students' chronotype with their motivation to learn English. The problem to be examined in this study is stated as follows:

1. What kind of chronotype preferences in the 2nd semester students majoring in English Language Education Department of UINSA?

2. What is the level of students' motivation to learn English in the 2nd semester students majoring in English Language Education Department of UINSA?
3. Is there a correlation between students' chronotype with students' motivation to learn English for 2nd semester students majoring in English Language Education Department of UINSA?

Those questions are to represent the purpose of what the researcher is looking for. The first, focus on the chronotype of students i.e. morning and evening types then the next focus on student motivation then both are accumulated with correlation.

C. Objectives of the Study

With regard to the questions of researcher, the purposes of this study were:

1. To find out the type of chronotype for 2nd semester students majoring in English Language Education Department of UINSA.
2. To find out the level of motivation of students learning English in 2nd semester students majoring in English Language Education Department of UINSA.
3. To investigate the relationship between student chronotype preferences and students' motivation to learn English for 2nd semester students majoring in English Language Education Department of UINSA.

D. Hypothesis

Temporary answers to research questions on the grounds that the answers only come from interrelated theories are called hypotheses[19]. Thus, the hypothesis is not a presumptive answer because it still has to be verified and investigated. This study has variables including chronotype preferences and students' level of motivation to learn English. There are two hypotheses to answer the research question:

1. H_1 (Alternative Hypothesis) of this study is there is a correlation between chronotype preferences and the level of student motivation in learning English.
2. H_0 (Null Hypothesis) of this study is there is no correlation between students' chronotype preferences and the level of students' motivation in learning English.

D. Significance of the Study

The current study is hoped to bring some significances:

a. Theoretical Significance

Bearing in mind, the perspective of students' chronotype in the Ministry of Education and Culture is different whether it is due to their activities outside the class hours or because of school work. If there is a large influence on a student's chronotype with their motivation to learn English, and then flash on

[19] Sugiyono, *Metode Penelitian Pendidikan: Pendekatan Kuatitatif, Kualitatif, Dan R&D* (Bandung: Alfabeta, 2016), 96.

the motivation is important to the learning process.[20] In other words, the activities revealed above are likely to influence their motivation to learn, which means it is important to increase their motivation to learn accordingly.

b. Practical Significance

- For teachers: Provide deeper information and provide motivation each time and each meeting where students' chronotypes are different.

- For students: Increase motivation for organized performance. Provide effort and awareness of their chronotype so as not to affect their learning motivation, especially learning English.

- For future researcher: Can help other researchers as their guide if they research related to the contents of this research with the development of their ideas or from different references. As with the emphasis on the content and balanced objectives of this study, namely emphasizing psychological data with education because did not focus intensively on psychological data.

E. Scope and Limitation of the Study

This research covers the content area about the chronotype or students' preferences about morningness or eveningness with their motivation when learning English. The reference comes from Horne and Gardner regarding the chronotype and motivation of learning English. Student chronotype and student motivation in learning English in 2nd semester students of UINSA's Spoken

[20] "Kementerian Pendidikan Dan Kebudayaan" (2013, n.d.), https://www.kemdikbud.go.id/kemdikbud/dokumen/Paparan/Paparan%20Wamendik.pdf.

English class. The class consists of 3 classes and 1 class contains around 29 students. This course is divided into several classes because of the student quota determined by the campus. Each class has a different teacher but still teaches the same subject. Having fun in the morning, getting up early and being more active in the morning are the preferences of some individuals. In contrast, the term night owl is more suitable for the preference of some individuals who sleep late, become more active at night until late at night. This study only focuses on measures on the correlation between students' chronotype and students' motivation to learn English. Students themselves need to set their own preferences to achieve motivation while learning English.

F. Definition of Key Terms

To shun misunderstanding and gain the same perception, the present study supplied the following key terms.

a. Chronotype is feature that mostly refers to alternatives whilst sleeping; the form of morning chooses to sleep about 2 hours in advance than the night time type depiction by Mecacci and Zani.[21] The indicators are highlighted by the individual's biological clock, heart rate for each type, blood level, temperature and level of alertness. However, in this study, the reference indicator is taken only as a preference, namely their activity hours which indicate the type of the individual. Chronotype is defined as the preference of students of the time (morning or evening type) to learning English. In

[21] Mecacci, L., & Zani, A., "Morningness–Eveningness Preferences and Sleep–Waking Diary Data of Morning and Evening Types in Student and Worker Samples," *1983* 26, no. 12, Ergonomics (n.d.): 1147–1153.

the Indonesian area, a 24 hour time system has been used. It was explained that morning activities start between 01.00 a.m.-10.00 a.m., noon is 12.00 p.m. but the time is between 11:00 a.m. to 02:00 p.m. it is said to be noon already[22], afternoon starts between 03:00 p.m. until 06:00 p.m. when the sun starts to lean and the night starts after sunset until past midnight which is 12.00 p.m. In fine, between 01.00 a.m.-10.00 a.m. the level of awareness and alertness is the morning type while the evening type is between 11:00 a.m. - 02:00 p.m.

b. According to Gardner,[23] language learning efforts, the desire to achieve certain goals is one of the motivational expressions that can have a positive effect on those who have motivation than those without prior motivation. This research also looks at the side found in Gardner's theory, then when it is excluded, this research calls it a benchmark or achievement of a person and pursed at the high or low they want to learn English with a variety of personal reasons students. The motivational indicators mentioned by Gardner include instrumental motivation, integrative motivation, intrinsic motivation (self-confidence), intrinsic motivation (integrative orientation), extrinsic motivation (instrumental orientation), extrinsic motivation (teachers and peer students), external encouragement, personal assessment. In addition, the indicators that can be picked up by researcher in this study are how high and how low their willingness to

[22] "Kamus Besar Bahasa Indonesia (KBBI) Kamus Versi Online/Daring (Dalam Jaringan)," n.d.
[23] Gardner, R. C., "Integrative Motivation and Second Language Acquisition. In Z. Dörnyei, & R. Schmidt (Eds.)."

learn English beside their chronotype. Whatever the high or low of their motivation, students can manage their chronotype better.

CHAPTER II

REVIEW OF RELATED LITERATURE

The second chapter addresses the theoretical framework on definition of chronotype, types of students' chronotype, definition of motivation in learning English, views on motivation and chronotype and motivation.

A. Review of Related Literature

1. Chronotype

Shows that, the characteristics of the morning type choose to sleep about 2 hours earlier than the description of the type of night which is even slower to sleep. This is a description of the meaning of sleep or chronotype preferences said by Mecacci and Zani.[24] Kanterman convey that the chronotype classification is divided into two types, namely morning type and night type. Two different types of morning and evening can be said that 01:00 am to 10:00 am is the morning type, and the alleged type of night tends to be active at 11:00 am to evening or night as Horne said.[25] In general, it can be said that someone with the morning type will wake up earlier and also sleep early, whereas someone with the night type will sleep late, and wake up late. The best performance of someone with the morning type is to be divided into the afternoon, while someone with the

[24] Mecacci, L., & Zani, A., "Morningness–Eveningness Preferences and Sleep–Waking Diary Data of Morning and Evening Types in Student and Worker Samples."
[25] Horne and Östberg, "Individual Differences in Human Circadian Rhythms."

type night is the night.[26] The morning chronotype (relative "on time" to an external clock reference) is a healthier lifestyle behavior than the night type uttered by Díaz-Morales and Sánchez-López.[27] Morning type is the type of person who starts more physical and intellectual activity in the morning. Whereas in people who have the type of night, more likely to start physical and intellectual activity more at night said by Horne and Ostberg.[28] Portrait from Sletten et al. also reveals that someone with the night type has a longer circadian period, whereas the morning type tends to be shorter.[29] So someone with the morning type is more alert in the morning, while someone with the night type is more alert at night.

This research area is an area that uses a 24 hour systemization. The term Greenwich Mean Time (GMT), known as the system of managing time differences in world countries based on geographical location. But on its way, GMT has now been replaced by UTC.[30] No more discussing it, researcher have mentioned the benchmark morning, afternoon, evening and night which can be interpreted as timing the morning and night types. The language agency of the Ministry of Education and Culture[31] says that

[26] Kantermann, T., "Circadian Biology: Sleep-Styles Shaped by Light-Styles, Current Biology," *August 2013* 23, no. 16 (n.d.): R689–R690.
[27] Juan Francisco Díaz-Morales and María Gutiérrez Sorroche, "Morningness-Eveningness in Adolescents," *The Spanish Journal of Psychology* 11, no. 1 (May 2008): 201–206.
[28] Horne, J. A., & Östberg, O, "A Self-Assessment Questionnaire to Determine Morningness-Eveningness in Human Circadian Rhythms."
[29] Sletten TL et al., "Inter-Individual Differences in Neurobehavioural Impairment Following Sleep Restriction Are Associated with Circadian Rhythm Phase" 10, no. 6 (June 2015): 1–16.
[30] Dr. Mego Pinandito M.Eng., "Jam Atom Dan Manfaat Standardisasi Waktu," *Lembaga Ilmu Pengetahuan Indonesia*, last modified December 3, 2017, accessed April 1, 2020, http://lipi.go.id/lipimedia/Jam-atom-dan-manfaat-standardisasi-waktu/18351.
[31] "Konsep Dan Implementasi Kurikulum 2013."

the words morning and afternoon or evening are like the 24 hour systemization above especially in Indonesia.

2. Types of students' chronotype

The timing system in the world generally shows that there are two systems namely the 12 hour and 24 hour per day system depending on the rotation of the earth in a particular place. The 12 hour time system is here to differentiate day and night from AM (Ante Meridiem or before noon) and P.M (Post Meridiem or after noon). However, if it shows at 11:00 am there is an assumption that the time is already showing noon.[32] Next is a 24-hour system that explains that morning activities start between 01:00 a.m. and 10:00 a.m., noon is 12:00 p.m. but the time between 11:00 a.m. to 02:00 p.m. is already said to be in the noon,[33] afternoon starts between 03:00 p.m. to 06:00 p.m. when the sun begins to incline, and the night starts after sunset until after midnight which is 12.00 p.m.[34] Therefore, the timing reference used by researcher is in the area of researcher namely the 24-hour system.

From the timing system above, there are only 2 types of discussion regarding the type of morning and evening. The morning-evening chronotype reflects individual differences in the behavior patterns of the circadian rhythm of the awake sleep cycle, which indicates a person's circadian variation. Based on the results of the MEQ Horne questionnaire self-assessment, showed that the night

[32] Kyleadolson et al., "12-Hour Clock (Latest Revision as of 23:38, 29 February 2020)," last modified February 29, 2020, accessed March 22, 2020, https://en.wikipedia.org/wiki/12-hour_clock.
[33] "Kamus Besar Bahasa Indonesia (KBBI) Kamus Versi Online/Daring (Dalam Jaringan)."
[34] Adrian J. Hunter et al., "24-Hour Clock (Latest Revision as of 08:48, 19 March 2020)," last modified March 19, 2020, accessed March 22, 2020, https://en.wikipedia.org/wiki/24-hour_clock.

type has a much slower peak time than the morning type.[35] Quoad to Kohyama, there are several causes of sleep deprivation in high school age adolescents, namely the use of mobile phones (42.4%), TV and video (38.8%), difficulty sleeping (27.1%).[36] Unexpected activities and in their environment that touches their chronotype.

3. Motivation in learning English

Important elements were mentioned by Gardner's[37] assumption that motivation lies in the process of learning a second/foreign language. Those elements are written, namely effort (efforts to learn a language), desire (want to achieve the goals) and positive influence (enjoying language learning tasks). By orientation, Gardner refers to "goals" as generating motivation and directing it to achieve the goals.[38] As for the two orientations pursuance from Gardner, integrative orientation point to a positive attitude towards the L2 community and the desire to be close to the community and even become members of that community. As opposed to integrative orientation, the pragmatic reason is referred to as the instrumental orientation of the reasons for studying L2, such as the goal of getting a higher salary at a better job.[39] Motivation tends to change, given the broad call to prop up students take responsibility for their own learning. In

[35] Horne and Östberg, "Individual Differences in Human Circadian Rhythms."
[36] Kohyama, J., "A Newly Proposed Disease Condition Produced by Light Exposure during Night: Asynchronization" 31, no. 4 (August 2009): 255–273.
[37] Gardner, R. C., "Integrative Motivation and Second Language Acquisition. In Z. Dörnyei, & R. Schmidt (Eds.)."
[38] Franzis Preckel et al., "Morningness-Eveningness and Educational Outcomes: The Lark Has an Advantage over the Owl at High School: *Morningness-Eveningness and Educational Outcomes*," *British Journal of Educational Psychology* 83, no. 1 (March 2013): 114–134.
[39] Gardner, R. C., "Social Psychology and Second Language Learning: London: Edward Arnold.," The Role of Attitudes and Motivation (1985).

addition, among the aspects of language learning that is the mainstay of students' choices, such as taking courses or not, allocating attention, have conversations with native people and so on. In learning English, even this is needed. Students who have strong motivation will be able to learn English faster compared to students who have no motivation.

4. Chronotype and Motivation

In recent years, sources of chronotype research with education have developed into the focus of previous research. One study said, in terms of student chronology is one of several factors that could affect the academic achievement. It was revealed that the source of the Chronotype with education can be indicated from various factors on the chronotype of students with their education, such as differences in the environment of one's residence, circumstances outside of school hours and outside of school, lack of motivation to learn English due to their chronotype, preferences that vary morning or night. From the chronotype theory by Horne and motivation theory by Gardner it can be considered as the subject of this research. Horne and Gardner have formulated and validated their instruments by making sure their questionnaires and samples have fulfilled criteria.[40] From the statement above, resources of chronotype research with schooling have developed into the focal point of previous research. It was discovered that the source of chronotype with education can be indicated from different factors at the chronotype of students

[40] Jacques Taillard et al., "Validation of Horne and Ostberg Morningness-Eveningness Questionnaire in a Middle-Aged Population of French Workers," *Journal of Biological Rhythms* 19, no. 1 (February 2004): 76–86.

with their education, which include differences in a person's house environment, circumstances outdoor of college hours and outdoor of school, loss of motivation to study English due to their chronotype, varying preferences inside the morning or night. Horne and Gardner have formulated and confirmed their units by ensuring that their questionnaire and pattern met the criteria. Those chosen theories and instruments have the reason that Horne has a comprehensive and easy instrument as well as Gardner's theory and instruments strengthen variables by referring to a special flow of language and has instrument items that are easy to analyze.

In line with what was found by Afghany and Faisal that night students prefer time to study at night until late at night, so that it has an impact on good cognitive abilities in students and different from morning type students.[41] The findings of Preckel et al. (r = .13). Morningness shows a significant positive correlation with awareness (r = 0.27), cognitive needs of (r = 0.24), goal orientation of mastery (r = 0.21) with a significant negative correlation with avoidance of work in schools (r = -.17), the performance goal orientation among (approach: r = -.12; avoidance: r = -.15). Called the name orientation or type, students with morning orientation go to bed earlier and wake up earlier than night orientation and produce positive result on achievement. Furthermore, night orientation has a positive correlation with daytime sleepiness.

[41] Faisal Afghaniy, "Hubungan Aantara Chronotype dengan Prestasi Belajar Pada Siswa Kelas XI di SMAN 1 BOYOLALI," *2017* (n.d.): 16.

B. Review of Previous Studies

Some allied research related to students' chronotype with education or motivation in learning English. The first previous study was juxtaposed with Preckel et al.[42] After the aim of this study controlled for many traditional predictors; the validity of other phenotypes as predictors of achievement was investigated. Therefore, further aim is to continue the verification of the chronotype questionnaire (Lark-Owl Chronotype Indicator). Using a Quantitative approach through questionnaires from the MCQ or Morningness-Eveningness Questionnaire, this previous study distributed two questionnaires for students only. Findings in the Preckel et al. study, [43] Morning and evening views show small negative correlation (r = -.18), aired a different dimension. Both were nothing to do with gender and cognitive abilities. Morningness was significantly positively correlated with awareness (r = 0.27), cognitive needs (r = 0.24), advanced goal orientation (r = 0.21) and was significantly positively correlated with avoiding school work (r = 0.15). Night performances were significantly positively correlated with avoidance at school (r = .13).[44] This study is similar to current research that talks about its relationship with students' chronotypes with students' motivation when learning English. However, they took from several subjects namely language and mathematics. This study explores the chronotype of students with academic achievement and school permission on several subjects as stated above.

[42] Preckel et al., "Morningness-Eveningness and Educational Outcomes."
[43] Ibid.
[44] Ibid.

The second previous study was by Beşoluk et al.[45] investigated whether students' circadian rhythm preferences are related to their academic performance. This study investigated whether the different school hours would affect student academic performance and tested students' performance on a final exam held at 9.30 a.m. to differentiate into a varied chronotype. A total of 1.471 students aged between 18 and 25 answered the Morningness-Eveningness Questionnaire (MEQ) and collected their cumulative grade point average (CGPA) from the transcripts. In the time of first learning at 8:00 a.m. until 2:50 p.m. who are attended in the learning and a number of students follow the next schedule at 3:00 p.m. and ends at 9:50 p.m. The MEQ predicted that the academic success and the variation of students' academic achievements based on the teaching time period. In addition, MEQ scores were found to differ by gender. In addition, the final exam scores (awarded at 09:30 hours) there were differences in circadian rhythm preferences, with students who preferred the morning type scored higher than students who preferred the afternoon or moderate type. Teaching time and examinations affect academic achievement.

The third study is conducted by Zerbini et al.[46] With the aim of proposing hypotheses about the mechanisms behind this complex phenomenon, previous studies examined the relationship between chronotype and school performance

[45] Şenol Beşoluk, İsmail Önder, and İsa Deveci, "Morningness-Eveningness Preferences and Academic Achievement of University Students," *Chronobiology International* 28, no. 2 (March 2011): 118–125.

[46] Giulia Zerbini and Martha Merrow, "Time to Learn: How Chronotype Impacts Education: Time to Learn: How Chronotype Impacts Education," *PsyCh Journal* 6, no. 4 (December 2017): 263–276.

by looking for solutions to optimize the school system. Researchers' expectations about direct and indirect effects on school performance. Indirect effects are mediated by factors such as awareness, motivation to learn/achievement, vigilance and emotions. In addition, the time of testing also plays an important role because the chronotype effect on the strongest value occurs in the morning and disappears or decreases in the afternoon. Strategies to reduce mismatches between adolescent circadian clocks and school hours may require gentle intervention to prolong student sleep time, delay school hours and reschedule exam schedules (for future exams).

The fourth is findings by Afghainy about the relationship between Chronotype and student achievement.[47] The cross-sectional approach and purposive sampling technique along with independent variable estimation (hazard calculation) have been used by Afgany's observational analytic research and the subordinate variable (impact) is done once and at the same time. This investigation was conducted at Boyolali 1 Open Tall School, Boyolali district in November 2016. The populace in this ponder was 925 understudies from SMA Negeri 1 Boyolali. The test was review XI understudies at Senior High School 1 Boyolali in 2016. The results of this study indicate that the majority of respondents have 38 students Chronotype in the morning (54%), and some other respondents have 33 students in the night chronotype (46%). The results seen in the cross table between Chronotype and learning achievement show that respondents who have morning Chronotype

[47] Afghaniy, "HUBUNGAN ANTARA CHRONOTYPE DENGAN PRESTASI BELAJAR PADA SISWA KELAS XI DI SMAN 1 BOYOLALI."

and achievers are 29 students (41%), while students who have morning Chronotype but who lack underachievement are 9 students (13%). In addition, there were 11 students (15%) who had a Night Chronotype and also performed well. Meanwhile students who have a night chronotype but lack of achievement are 22 students (31%).

Derive from those previous studies described above, it can be concluded that they all have a touching topic between students' chronotype and subjects around education including motivation. Previous studies can be used as a basis and reference for conducting this research. Not yet known is clearer the correlation between students' chronotype with learning motivation, especially in English lessons. Coupled with the different environment of the participants, where they are not native speakers or English as their first language and English as their second language and some even become their foreign language. Some of these things can affect the results of different correlations on the correlation between the type of morning, type of night and motivation to learn English. Furthermore, some studies take several subjects not just English. Then, this study tries to measure the significance of students' chronotype with students' motivation when learning English.

CHAPTER III

RESEARCH METHOD

The third chapter describes how to conduct this research in measuring students' chronotype correlations and students' motivation to learn English which involves (1) research design, (2) subjects and research settings, (3) data and data sources, (4) data collection techniques, (5) research instruments, (6) data analysis techniques.

A. Research Design

Pursuant to Nursalam research design is a plan or strategy for conducting research.[48] To achieve the goal, a study certainly has a research design that is a strategy that has been determined and proposed as a guideline or guide to the discovery of the entire research process.[49] This research was conducted to measure the correlation between students' Chronotype and Students' motivation in learning English. Thus, this study used quantitative research because the calculated data includes figures from several aspects of the content. This research was conducted in order to describe two or more facts and also the properties of the object being studied. This research was conducted to compare the equations with differences in two or more facts based on the existing framework so that the results can be clearly seen. Aliaga and Gunderson delineate quantitative research methods as an explanation of a problem or phenomenon that collects data in numerical form and analyzes it with the help

[48] Nursalam, *Konsep Dan Penerapan Metodologi Penelitian Ilmu Keperawatan Pedoman Skripsi, Tesis Dan Instrumen Penelitian Keperawatan*, Salemba Medika. (Jakarta, 2003).
[49] Ibid.

of mathematical methods in statistics.[50] Data in the form of numbers or scores and is usually obtained using data collection tools. For this reason, researcher used several measurement tools such as Google forms, Microsoft Excel and SPSS to analyze them.

B. Population of sample and Setting of the Research

As claimed by Randler and Frech at puberty, many teenagers or adolescence refer to the type of night.[51] This research selected college students because students coincide at an age that is considered a teenager or an adult. The transition to the type of night, which occurred around adolescence as stated by Adan et al.[52] Generally, adolescence lasts between the ages of 17 years to 22. Thus, became a suspicion of the researcher to be used as research on the correlation of students' chronotype and students' motivation to learn English.

This research was conducted in the scope of Indonesia in English Language Education Department of UINSA. Despite their being teenagers or adults, students may not be able to manage their chronotype with their motivation to learn English. They must pay close attention to their motivation in the direction they have chosen. At the age extend of young people and grown-ups are undoubtedly met with more exercises that are difficult to manage, particularly in their rest inclination or their chronotype whether it's

[50] Aliaga, M. and Gunderson, B. (2002) Interactive Statistics. [Thousand Oaks]: Sage Publications.
[51] Randler C and Frech D, "Correlation between Morningness–Eveningness and Final School Leaving Exams" 37, no. 3 (August 2006): 233–239.
[52] Ana Adan et al., "Circadian Typology: A Comprehensive Review," *Chronobiology International* 29, no. 9 (November 2012): 1153–1175.

morning or night. Such as unexpected activities in the environment i.e. sudden meetings and work at home. Students determine their chronotype due to activities in their environment such as continuing their learning activities until late or other activities outside of learning. In the second semester of Spoken English subject, that is where participants were selected by researcher. Several classes are taken to be used as a sample, namely 3 Spoken English classes for 2nd semester students because they have the criteria of being in their teens and adults that their agenda or type changes as Randler and Frech said.[53] Participants had the exact criteria with the dominant statement being adolescents or adults. Each class contains 30 students or more.

C. Data and Source of Data

Based on the research questions, the data collected in this study was the students' chronotype and students' motivation when learning English. This data were obtained from students' answers to questions that have been answered by students. Then it was accumulated to Google form data and copied in Microsoft Excel and then correlated with SPSS tools or applications. Some theories in terms of measuring student chronotype and student motivation when learning English were obtained from several books, articles, and journals to support the results.

D. Data Collection Technique

Data collection techniques described the ways researcher to take the data needed. Looking back at the data presented and the data sources above, it

[53] Randler C and Frech D, "Correlation between Morningness–Eveningness and Final School Leaving Exams."

could be announced the following data collection techniques: Researcher looked back at the research questions made previously including What kind of chronotype preferences, What is the level of students' motivation to learn English andIs there a correlation between students' chronotype with students' motivation to learn English for 2nd semester students majoring in English Language Education Department of UINSA? then obtained the students' chronotype data, students' level of motivation and the correlation between both variables. All sources of data taken were from students with survey techniques to know the intended participants by explaining the method of working on a research questionnaire.

To collect correlation data from students' chronotype and students' motivation to learn English in the research area chosen by researcher, that was only surveys and giving questionnaires to selected students. The first technique, the researcher surveyed students needed by researcher was around the adolescence and above who were in English Language Education Department of UINSA especially in spoken English class at 2nd semester. Three classes in spoken English class at 2nd semester comprised around 60 students less or more. The researcher borrowed spoken English study time to be used to explain instructions of answering questionnaires. The time lent ranges from 10 minutes or more. Because of the latest conditions this year, the researcher changed their agenda to an online survey and participants took their questionnaire online. The researcher asked the instructor lecturer for the time students' work on the research questionnaire. Questionnaires are provided by

researcher on Google form. Participants are asked to fill in all the answers in accordance with their personal preferences. The questionnaire were divided into 2 sessions namely the first questionnaires about students' chronotype, how students' preferences about their type whether morningness or eveningness. Followed by the second session, the questionnaires are about students' motivation to learn English, how their views about learning English whether they have their own targets in themselves or not and high or low their motivation. Each question is important to answer because it has value to correlate. The researcher did not provide a time limit because the questionnaire was done outside of class hours or when there were free time students. Researcher's preparation for the questionnaire to be used was prepared before the participant's survey agenda was conducted online or paperless. Giving questionnaires to students is intended to collect more data about the correlation of students' chronotype and students' motivation to learn English.

E. Research Instrument

This section informs about the instrument or aids that are used as data collection for researcher. The questionnaire that used to collect student chronotype correlation data with students' motivation to learn English is used by researcher in the designated participant area, namely English Language Education Department of UINSA. This research involved second semester college students in spoken English classes at the English Language Education Department of UINSA with a range of adolescents totaling around 60 or more students in 3 classes to answer the questionnaire given by the researcher. Each

class consists of 20 students. Based on students 'Chronotype theory and students' motivation to learn English as stated by Horne, Preckel, Beşoluk et al.[54] aspects that are covered in the question items include the student's sleep preference activities or outside school hours. There are 10 questions about students' chronotype collected and developed by researcher from Horne, J.A.; Östberg, O.[55] Previously, participants were asked to fill in the name column of sex and age. Numbers 1-2 ask about individual rhythm considerations at what time you wake up and sleep, numbers 3-5 ask about dependence on tools and the environment when you sleep or wake up, number 6 asks about how your appetite after waking up in the morning, numbers 7-10 ask about how participant preferences are and some of their activity time. This questionnaire was used in several studies from year to year and developed according to the needs of each researcher, including research by Yoon-MiHur et al.[56] in 1998, John Song et al.[57] in 2000, Juan F. Díaz-Morales et al.[58] in 2008, then from the research of Leon Lack et al.[59] in 2009.

Aspects of the second session questions include measuring the level of motivation of students learning English. This has been stated by several

[54] Beşoluk, Önder, and Deveci, "Morningness-Eveningness Preferences and Academic Achievement of University Students."
[55] Horne JA and Östberg O, "A Self-Assessment Questionnaire to Determine Morningness-Eveningness in Human Circadian Rhythms" 4, no. 2 (February 1976): 97–110.
[56] Yoon-MiHur, Thomas J.BouchardJr, and David T.Lykken, "Genetic and Environmental Influence on Morningness–Eveningness" 25, no. 5, Personality and Individual Differences (November 5, 1998): 917–925.
[57] John Song and Con K K Stough, "The Relationship between Morningness–Eveningness, Time-of-Day, Speed of Information Processing, and Intelligence" 29, no. 6 (December 2000): 1179–1190.
[58] Díaz-Morales and Sorroche, "Morningness-Eveningness in Adolescents."
[59] Leon Lack et al., "Chronotype Differences in Circadian Rhythms of Temperature, Melatonin, and Sleepiness as Measured in a Modified Constant Routine Protocol," *2009* 10, no. 1 (April 11, 2009): 1–8.

existing studies. Around 19 questions based on Gardner Test Battery (AMTB) Attitudes / Motivation adapted by Gardner in 2004 which have been adopted by many researchers in L2 and FL motivations. [60] First, researcher read the first and second session questions to choose what is needed and which is not intended to be answered or developed. All sessions are provided instructions on how to do it. The items are divided into several according to meaning or content. Items 1-2 about students' in daily life with English and their devotees, items 3-4 about instrumental motivation, items 5-7 about integrative motivation, items 8-11 extrinsic motivation, items 12-16 about external encouragement, items 19 about personal assessment. After the questionnaire is developed, a validation process is the next. Validity seen from the validity of the data obtained in accordance with the objectives of previous studies and according to several previous studies using the same questionnaire instrument. Assisted by a psychology lecturer in UINSA named Soffy Balgies M. Psi was asked to prove the truth. Respondents need to answer all the questions individually because the questions include the results of themselves not others. To facilitate students, each question is available in English and translation. The link provided by the researcher to fill in the questionnaire is as follows shorturl.at/nyJW9.

[60] R. C. Gardner, Ph.D., "Attitude/Motivation Test Battery: International AMTB Research Project," published pdf, last modified 2004, accessed December 31, 2019, http://hyxy.nankai.edu.cn/jingpinke/buchongyuedu/Motivation%20measurement-AMTB.pdf.

F. Data Analysis Technique

The results of the questionnaire answers are recorded in Google form then the data is entered in Excel spreadsheet with one column corresponding to one item in the questionnaire. Then enter it into SPSS to be accumulated automatically. Researcher applied the 2-subject correlation technique namely student chronotype and student motivation to learn English. Researcher also sort data by name, age and gender. Prior to the above, the thing that becomes the reference for correlation is the Spearman correlation. Spearman correlation is a measurement taken from an ordinal scale. This ordinal scale that is not only indicated categories but shows rankings takes higher level rather than the nominal scale. Besides, the objects or categories are structured from lowest level to the highest level or otherwise from the highest level to the lowest level.

Spearman correlation reference[61] guidelines refer to the following:

1. The significance value is used to see whether there is a relationship or not:
   - If the significance value < 0.05. Then it is correlated.
   - If the significance value > 0.05. Then it is uncorrelated.
2. The Spearman coefficient value is used to see the strength of the correlation between the two variables:
   - Spearman coefficient value 0.00 to 0.25 = very weak correlation.
   - Spearman coefficient value 0.26 to 0.50 = sufficient correlation.
   - Spearman coefficient value 0.51 to 0.75 = strong correlation.

[61] Sahid Raharjo, "Tutorial Analisis Korelasi Rank Spearman dengan SPSS," 2017, accessed November 1, 2021, https://www.spssindonesia.com/2017/04/analisis-korelasi-rank-spearman.html.

- Spearman coefficient value 0.76 to 0.99 = very strong correlation.
- Spearman coefficient value 1.00 = perfect correlation.

3. Criteria for variable correlation direction used to see the direction of the correlation is positive or negative:
   - The direction of correlation is seen in the correlation coefficient
   - The value of the correlation coefficient between + 1 to - 1.
   - If the correlation coefficient is positive, then the relationship between the two variables is in the same directional and vice versa.

G. Checking Validity of Findings

RQ: Is there a correlation between chronotype and student motivation?

Showing the level of reliability or accuracy of the questionnaire measuring instrument requires adequate validation in a study.[62] After validating, this spot can show the direction of accuracy between the data that actually occurred on the subject and the data collected by researcher. The use of measuring instruments in research means that it has passed the validity test which is interpreted as valid at the measured value.

To check the legality or validity of the findings, the findings were confirmed by the theory used in this study. Related to existing theories, the series of the studies states that there are two common preferences in students'

[62] Sugiyono, *Metode Penelitian Pendidikan: Pendekatan Kuatitatif, Kualitatif, Dan R&D*. (Bandung: Alfabeta, 2016), 125.

chronotypes namely morningness and eveningness.[63] This validity measurement is done by connecting or correlating the scores with the number of items available. Based on the Horne and Ostberg classification.[64] It is written that, 62.1% were the morning type samples, 36.6% were the middle type samples and 2.2% were the evening type samples. The absent type refers to other factors such as high motivation. Multiple correspondence analysis was carried out to represent the diversity of performance in a person who is on all MEQ items. The night type is considered a score below 53 and the morning type aloft 64, thus giving the morning type 28.1%, the non-existent type 51.7%, and the evening type 20.2%. As external validation, nights were associated with later sleep and wake times, owe hours of sleep or the amount of sleepiness in the morning and the ease of getting back to sleep in the morning. Found again about positive correlation between age and type of morning. It is confirmed by this study that it is no often for adults sample to find dean claims to be owls.

That score is a type of students' chronotype preference and students' motivation for learning English. Assisted by the supervisor of this research was asked to prove the truth. Several cases of chronotype were assessed by questionnaire. The chronotype is declared as a continuous variable as it said in Munich ChronoType Questionnaire [MCTQ] by Roenneberg et al.[65]. The

[63] Mecacci, L., & Zani, A., "Morningness–Eveningness Preferences and Sleep–Waking Diary Data of Morning and Evening Types in Student and Worker Samples."
[64] Taillard et al., "Validation of Horne and Ostberg Morningness-Eveningness Questionnaire in a Middle-Aged Population of French Workers."
[65] Till Roenneberg, Anna Wirz-Justice, and Martha Merrow, "Journal of Biological Rhythms."

researcher reads and analyzes the existing questionnaires and takes the required questions. The question needed is reasonable because it involves aspects of existing students. The researcher also reads and analyzes the second session's question item which concerns the level of motivation of students learning English. It can be guessed from the above statement because age and gender make the correlation results vary. However, if it is assisted by a motivation then that motivation will help reduce the problems faced such as staying awake even though their chronotype type is inappropriate.

1. Validity

The table above reveals the validity test for the corrected item-total correlation by calculating the study of V. Wiratna Sujarweni[66], if the $r_{count} > r_{tabel}$ product moment, the questionnaire item is declared valid and vice versa. The formula for the r_{table}, namely the degree of freedom or abbreviated as DF, is specified to be N / the number of respondents minus 2 and the result becomes the appropriate choice of r_{table}. The following is the table of data distribution and the questionnaire validity test.

Table 3.1.1 Distribution of r_{table} significance 5%

N	The Level of Significance
	5%
38	0.320

[66] V. Wiratna Sujarweni, *SPSS untuk Penelitian*, Ed.1 Cet. 1. (Yogyakarta Pustaka Baru Press, 2014), /DetailOpacBlank.aspx?id=25000.pp.192

NB: The table above is a reference to the validity value of each item (r_{table} 5% degree of freedom ((N-2 =) (40-2 = 38)).

Table 3.1.2 The results of validity test of chronotype questionnaires variable

VARIABLE VALIDITY TEST RESULTS			
Item questions	**r_{count}**	**r_{table} 5% degree of freedom ((N-2=) (40-2=38))**	**Criteria**
1	.432	0.320	Valid
2	.637	0.320	Valid
3	.560	0.320	Valid
4	.371	0.320	valid
5	.371	0.320	valid
6	.371	0.320	valid
7	.454	0.320	valid
8	.550	0.320	valid
9	.585	0.320	valid
10	.552	0.320	valid

The results of the validity test in table 3.1.2 above indicate that all questions are valid because r_{count} value greater than the r_{table} value, then if the research results are tested could calculated questions are feasible.

Table 3.1.3 The results of validity test of motivation questionnaires variable

VARIABLE VALIDITY TEST RESULTS			
Item questions	**r_{count} / Corrected Item- Total Correlation**	**r_{table} 5% degree of freedom ((N-2=) (40-2=38))**	**Criteria**
1	.483	0.320	Valid
2	.750	0.320	Valid
3	.598	0.320	Valid
4	.707	0.320	Valid
5	.554	0.320	Valid
6	.709	0.320	Valid
7	.584	0.320	valid
8	.628	0.320	Valid
9	.351	0.320	Valid
10	.408	0.320	Valid
11	.333	0.320	Valid
12	.333	0.320	Valid
13	.648	0.320	Valid
14	.364	0.320	Valid
15	.439	0.320	Valid
16	.356	0.320	Valid
17	.565	0.320	Valid
18	.583	0.320	Valid

19	.333	0.320	Valid

Furthermore, from the table 3.1.3 shows the validity of the motivation questionnaire. It is stated that all questions are declared valid because the r_{count} value is greater than the r_{table} value. Therefore, if the research results are tested then the calculated questions are feasible.

2. Reliability

Reliability testing has been carried out with the general purpose of understanding the extent to which the instrument could be trusted or relied upon if repeatedly used to measure the same degree of symptoms. Consistency from time to time is the request of the answers that are sought so that the above meaning is fulfilled and the questionnaire is considered reliable. Conbach 'Alpha is used to measure the reliability of the questionnaire from the chronotype items and students' motivation items. Ideally, the value of the Cronbach 'Alpha coefficient according to V. Wiratna Sujarweni[67] is that the decision making is at least the ratio must be more than 0.600. Calculations using SPSS 16.0 for Windows show that the suitability of the questionnaire is very reliable with a Cronbach 'Alpha value of 0.725 for the chronotype questionnaire and 0.857 for the students' motivation questionnaire. More details will be presented in the table below.

[67] Ibid.pp.192

Table 3.2.1 The results of reliability test

NO	VARIABLE	Cronbach's α	CONCLUSION	EXPLAINATION
1	Students' Chronotype	0,725	Reliable	Because of Cronbach > 0,6
2	Students' Motivation	0,857	Reliable	Because of Cronbach > 0,6

The results of calculations using SPSS 16.0 above indicate that all Cronbach 'Alpha values listed in table 3.2.1 are variables greater than 0.725. it could be said that all research instruments are reliable.

Furthermore, in the Spearman correlation from Sugiono's[68] statement that the spearman correlation is part of non-parametric statistics and therefore in this correlation analysis it is not necessary to assume a linear relationship between the research variables. The rest, this study also uses most of the Likert scale data and has the same scale distance so that it does not have to be normally distributed or can pass the normality and linearity test.

[68] Raharjo, "Tutorial Analisis Korelasi Rank Spearman dengan SPSS."

CHAPTER IV

FINDINGS AND DISCUSSION

Regarding the problem statement, this chapter describes and analyzes the findings of the second semester student in the spoken English class majoring in English Language Education Department of UINSA. It was intended to answer the research problem. In its findings, researcher described the process of calculating and presenting data results. Meanwhile, in the discussion the researcher concluded the findings:

A. **Research Finding**

The data for the research was collected from questionnaires and support from the results of the participant survey referred to in this study. The data was analyzed systematically to enable drawing conclusions related to the research objectives. The presentation of the research findings in this chapter are separated into three parts as follow.

1. Chronotype preferences of students learning English

The research question from this study is about whether there is a correlation between students' chronotype and their motivation to learn English. This research used a questionnaire to obtain information from respondents. The questionnaire was arranged in the form of alphabetical choices that showed students' preference choices. Student responses are sorted according to their preferences. Respondents indicate their opinions by placing their choices by clicking on the alphabetical choices available on the choices that best represent

how they feel. Before presenting a table about the chronotype preferences of students learning English, the researcher presented a table of participants who filled out the questionnaire with their age and gender. Researcher provide a first step in how researchers analyze the questionnaire by describing one by one the participants' answers to each question item complete with their age and gender. The detailed data below will be explained again descriptively.

Table 4.1 Respondents of questionnaire

17 year old male	18 year old male	19 year old male	20 year old male	TOTAL	PERCENTAGE
0	0	2	2	4	10%
17 year old female	18 year old female	19 year old female	20 year old female	TOTAL	PERCENTAGE
1	14	19	2	36	90%

Turning back to the previous expectation, the researcher only got a portion of the data from the initial sample of 60 but only came back as many as 40 as the answer to the research questionnaire. The respondents were 40 students from UINSA's second semester of Spoken English class, consisting of 4 male students and 36 female students. Two male students aged 19 years and two male students aged 20 years. One female student aged 17 years, eighteen female students aged 14 years, nineteen female students aged 19 years and two female students aged 20 years.

Table 4.2.1 The planning of students' wake-up hours at morning

Questionnaire	The answers	Female		Male	Percentag
Q1. Considering only your own "feeling best" rhythm, at what time would you get up if you were entirely free to plan your day? (Hanya mempertimbangkan ritme Anda sendiri "perasaan terbaik/preferensi", pada jam berapa Anda bangun jika Anda sepenuhnya bebas merencanakan hari Anda?)	a. 5am – 6:30am	**AGE17**	1	0	-
		AGE18	7	0	
		AGE19	12	2	
		AGE20	2	1	
	TOTAL	=	22	3	62%
	b. 6:30am to 7:45am	**AGE17**	0	0	-
		AGE18	2	0	-
		AGE19	1	0	-
		AGE20	0	1	-
	TOTAL	=	3	1	10%
	c. 7:45am – 9:45am	**AGE17**	0	0	-
		AGE18	3	0	-
		AGE19	3	0	-
		AGE20	0	0	-
	TOTAL	=	6	0	15%
	d. 9:45am – 11am	**AGE17**	0	0	-
		AGE18	2	0	-
		AGE19	2	0	-
		AGE20	0	0	-
	TOTAL	=	4	0	10%
	e. 11am – 12pm	**AGE17**	0	0	-
		AGE18	0	0	-
		AGE19	1	0	-
		AGE20	0	0	-
	TOTAL	=	1	0	3%
	TOTAL NUMBER	36		4	100%

Explanation from the table above, starting from question number one, namely Considering only your own "feeling best" rhythm, at what time would you get up if you were entirely free to plan your day?" Inquire about a person's waking plans if they can fully plan their activities. The highest percentage was in answer a where students wanted to wake up early with a percentage of 62% compared to other answers, namely waking up above 06.30 in the morning.

Table 4.2.2 The planning of students' sleep hours at night

Questionnaire	The answers	Female		Male	Percentag
Q2. Considering only your own "feeling best" rhythm, at what time would you go to bed if you were entirely free to plan your evening? (Hanya mempertimbangkan ritme Anda sendiri "perasaan terbaik/preferensi", pada jam berapa Anda akan tidur jika Anda sepenuhnya bebas untuk merencanakan malam Anda?)	a. 8pm – 9pm	AGE17	0	-	-
		AGE18	1	-	-
		AGE19	0	1	-
		AGE20	0	0	-
	TOTAL	=	1	1	5%
	b. 9pm – 10:15pm	AGE17	0	-	-
		AGE18	4	-	-
		AGE19	6	1	-
		AGE20	0	1	-
	TOTAL	=	10	2	30%
	c. 10:15pm – 12:30am	AGE17	1	-	-
		AGE18	6	-	-
		AGE19	9	0	-
		AGE20	2	0	-
	TOTAL	=	18	0	45%
	d. 12:30am – 1:45am	AGE17	0	-	-
		AGE18	2	-	-
		AGE19	2	0	-
		AGE20	0	1	-
	TOTAL	=	4	1	12.5%
	e. 1:45am – 3am	AGE17	0	-	-
		AGE18	1	-	-
		AGE19	2	0	-
		AGE20	0	0	-
	TOTAL	=	3	0	7.5%
	TOTAL NUMBER	36		4	100%

Question number two on consideration of rhythm "best feel / preference", at what time would you sleep if you were completely free to plan your nights. The percentage who chose bedtime at 09.00 p.m. by 30 percent was ten female students aged 18 years and 19 years plus two male students aged 19 years and 20 years. It can be interpreted that students choose early bedtime so they can wake up on time and carry out activities in the morning. Furthermore, the largest is 45 percent for answer c, which is choosing to sleep at 10:15 a.m. including eighteen female students aged 17 to 20 years who can be stated that they still choose an earlier sleep schedule. On the other hand, voters slower sleep hours by 20 percent combined from 12.30 p.m. and 01.45

a.m. daybreak including seven female students and one male student according to their age in table 4.2.2.

Table 4.2.3 Students' dependence on alarms

Questionnaire	The answers	Female		Male	Percentage
Q3. If there is a specific time at which you have to get up in the morning, to what extent are you dependant on being woken up by an alarm clock? (Jika ada waktu tertentu di mana Anda harus bangun di pagi hari, sejauh mana Anda tergantung pada alat pembangun anda seperti jam alarm Anda?)	a. Not al all dependent (Tidak semuanya tergantung)	**AGE17**	1	-	-
		AGE18	3	-	-
		AGE19	4	2	-
		AGE20	1	2	-
	TOTAL	=	9	4	32%
	b. Slightly dependent (Sedikit tergantung)	**AGE17**	0	-	-
		AGE18	3	-	-
		AGE19	2	0	-
		AGE20	1	0	-
	TOTAL	=	6	0	15%
	c. Fairly dependent (Cukup tergantung)	**AGE17**	0	-	-
		AGE18	5	-	-
		AGE19	8	0	-
		AGE20	0	0	-
	TOTAL	=	13	0	33%
	d. Very dependent (Sangat tergantung)	**AGE17**	0	-	-
		AGE18	3	-	-
		AGE19	5	0	-
		AGE20	0	0	-
	TOTAL	=	8	0	20%
	TOTAL NUMBER	36		4	100%

The third item of question contains dependence on reminders such as sleep wake-up alarms. The results above show that many students choose answers depending on the alarm with a percentage of 33 percent and 20 percent of the three female students aged 18 years and five female students aged 20 years. This indicates that not everything depends on habit construction tools such as alarms.

Table 4.2.4 Students' appetite after waking up in the morning

Questionnaire	The answers	Female		Male	Percentage
Q4. How is your appetite during the first half-hour after having woken in the mornings? (Bagaimana nafsu makan Anda selama setengah jam pertama setelah bangun di pagi hari?)	a. low (rendah)	AGE17	0	-	-
		AGE18	7	-	-
		AGE19	11	1	-
		AGE20	1	2	-
	TOTAL	=	19	3	55%
	b. Fairly good (Cukup bagus)	AGE17	0	-	-
		AGE18	5	-	-
		AGE19	6	1	-
		AGE20	1	0	-
	TOTAL	=	12	1	32%
	c. Very good (Bagus sekali)	AGE17	1	-	-
		AGE18	2	-	-
		AGE19	3	0	-
		AGE20	0	0	-
	TOTAL	=	5	0	13%
	d. Very strong (Sangat kuat/Sangat	AGE17	0	-	-
		AGE18	0	-	-
		AGE19	0	0	-
		AGE20	0	0	-
	TOTAL	=	0	0	13%
	TOTAL	36		4	100%

The fourth question contains about appetite in the first hour after waking up in the morning. The results above show that many students choose low answers with a percentage of 55 percent including 7 female students aged 18 years, 11 female students aged 19 years, 1 female student aged 20 years, 1 male student aged 19 years and 2 male students, 20 year old male. With that, after the most answers to question number 5, namely being a little alert during the first hour of getting up in the morning and the result is that the appetite is still low. It is followed by 32 percent who answered that their appetite was good in the first hour of the morning.

Table 4.2.5 Students' wake up commitment

Questionnaire	The answers	Female		Male	Percentage
Q5. When you have no commitments the next day, at what time do you go to bed compared to your usual bedtime? (Ketika Anda tidak memiliki komitmen pada hari berikutnya, jam berapa Anda pergi tidur dibandingkan dengan jam tidur Anda yang biasanya?)	a. Seldom or never later (Jarang atau tidak pernah terlambat)	AGE17	0	-	-
		AGE18	2	-	-
		AGE19	4	1	-
		AGE20	0	1	-
	TOTAL	=	6	2	20%
	b. Less than one hour later (Kurang dari satu jam	AGE17	0	-	-
		AGE18	4	-	-
		AGE19	3	1	-
		AGE20	0	1	-
	TOTAL	=	7	2	22%
	c. 1 – 2 hours later (1 - 2 jam kemudian)	AGE17	1	-	-
		AGE18	6	-	-
		AGE19	8	0	-
		AGE20	1	0	-
	TOTAL	=	16	0	40%
	d.More than two hours later (Lebih dari dua jam kemudian)	AGE17	0	-	-
		AGE18	2	-	-
		AGE19	4	0	-
		AGE20	1	0	-
	TOTAL	=	7	0	18%
	TOTAL	36		4	100%

The fifth question contains about no commitment to get up early to do activities. The results above show that more than 40 percent plan above the usual waking hours and like after doing late night activities in other words become the type of night when there is no commitment to get up early. On the other hand, there are those who still plan not to be late when they wake up in the morning and carry out activities in the morning by 20 percent, including 2 18 year old female students, 4 19 year old female students, 1 male student 19 years old and 1 male student 20 year old male. Another point of the answer to this question is that there are not a few

students who spend the night doing things such as their learning activities until late and the next day waking up at an unusual time.

Table 4.2.6 Students' tired feeling at night

Questionnaire	The answers	Female		Male	Percentage
Q6. At what time in the evening do you feel tired and as a result in need for sleep? (Jam berapa di malam hari Anda merasa lelah dan akibatnya perlu tidur?)	a. 8pm – 9pm	AGE17	0	-	-
		AGE18	3	-	-
		AGE19	2	2	-
		AGE20	0	1	-
	TOTAL	=	5	3	20%
	b. 9pm – 10:15pm	AGE17	0	-	-
		AGE18	2	-	-
		AGE19	8	0	-
		AGE20	0	0	-
	TOTAL	=	10	0	25%
	c. 10:15pm – 12:45am	AGE17	1	-	-
		AGE18	6	-	-
		AGE19	8	0	-
		AGE20	2	1	-
	TOTAL	=	17	1	45%
	d. 12:45am – 2am	AGE17	0	-	-
		AGE18	3	-	-
		AGE19	1	0	-
		AGE20	0	0	-
	TOTAL	=	4	0	10%
	e. 2am – 3pm	AGE17	0	-	-
		AGE18	0	-	-
		AGE19	0	0	-
		AGE20	0	0	-
	TOTAL	=	0	0	0%
	TOTAL	36		4	100%

The sixth question contains about student tired hours at night and makes students have to go to sleep. The results above show that 45 percent plan their sleep time between 10.15 p.m. and 12.45 p.m. It can be said that students still want to do activities at night until their tired hours are between 10.15 p.m. and 12.45 a.m., which is likely that they are still quite dependent on the builder's alarm so they can get up in the morning.

However, 10 percent of students answered that their hours of fatigue at night were 12.45 a.m. and 02.00 a.m. and they were definitely the night type.

Table 4.2.7 Students' peak performance when awake

Questionnaire	The answers	Female		Male	Percentage
Q7. You want to be at your peak performance for the activities you do. You are completely free to plan your day and only consider your own "best feeling" rhythm, which of the four choices will you choose? (Anda ingin berada pada kinerja puncak Anda untuk aktifitas yang Anda lakukan. Anda sepenuhnya bebas untuk merencanakan hari Anda dan hanya mempertimbangkan ritme "perasaan terbaik" Anda sendiri, yang mana dari empat pilihan yang akan Anda pilih?)	a. 8am – 10am	AGE17	1	-	-
		AGE18	8	-	-
		AGE19	8	2	-
		AGE20	2	2	-
	TOTAL	=	19	4	57%
	b. 11am – 1pm	AGE17	0	-	-
		AGE18	2	-	-
		AGE19	4	0	-
		AGE20	0	0	-
	TOTAL	=	6	0	15%
	c. 3pm – 5pm	AGE17	0	-	-
		AGE18	1	-	-
		AGE19	3	0	-
		AGE20	0	0	-
	TOTAL	=	4	0	10%
	d. 7pm – 9pm	AGE17	0	-	-
		AGE18	3	-	-
		AGE19	4	0	-
		AGE20	0	0	-
	TOTAL	=	7	0	18%
	TOTAL	36		4	100%

The seventh question is about the peak performance they want to do on the day they wake up. The results above show that 57 percent stated that students want their best activities to be done in the morning hours, namely 08.00 a.m. to 10.00 a.m. because they are still fresh and can do their activities properly. On the other hand, there is also a night type that chooses the peak activity is 11 a.m. to 01.00 p.m. which includes past

morning hours according to the 24-hour time system user and states they are night type students.

Table 4.2.8 Slower bedtime options

Questionnaire	The answers	Female		Male	Percentage
Q8. For some reason you have gone to bed several hours later than usual, but there is no need to get up at any particular time the next morning. Which one of the following events are you most likely to experience? (Untuk beberapa alasan Anda tidur beberapa jam lebih lambat dari biasanya, tetapi tidak perlu bangun pada waktu tertentu keesokan paginya. Manakah dari peristiwa berikut yang paling mungkin Anda alami?)	a. Will wake up at usual time and will not fall asleep (Akan bangun pada waktu biasa dan tidak akan tertidur)	**AGE17**	1	-	-
		AGE18	4	-	-
		AGE19	3	0	-
		AGE20	2	2	-
	TOTAL	=	10	2	30%
	b. Will wake up at usual time and will doze thereafter (Akan bangun pada waktu biasa dan akan tertidur sesudahnya)	**AGE17**	0	-	-
		AGE18	2	-	-
		AGE19	2	2	-
		AGE20	0	0	-
	TOTAL	=	4	2	15%
	c. Will wake up at usual time but will fall asleep again (Akan bangun pada waktu biasa tetapi akan tertidur	**AGE17**	0	-	-
		AGE18	6	-	-
		AGE19	10	0	-
		AGE20	0	0	-
	TOTAL	=	16	0	40%
	d. Will not wake up until later than usual (Tidak akan bangun sampai lebih lambat dari biasanya)	**AGE17**	0	-	-
		AGE18	2	-	-
		AGE19	4	0	-
		AGE20	0	0	-
	TOTAL	=	6	0	15%
	TOTAL NUMBER	36		4	100%

The eighth question contains about students choosing a slower bedtime than usual. The results above show that 40 percent say they will wake up at the usual time but will fall asleep. Among them are 6 female students aged 18 years and 10 female students aged 19 years which means they are less able to adapt when they are not sleeping long enough. On the other hand, 30 percent of students choose to wake up at normal hours and stay awake for their activities and this means that they can adapt after choosing a late bedtime.

Table 4.2.9 The peak feeling of student's best performance

Questionnaire	The answers	Female		Male	Percentage
Q9. At what time of the day do you think that you reach your "feeling best" peak? (Pada jam berapa menurut Anda Anda mencapai puncak "perasaan terbaik" Anda?)	a. 5am – 10am	AGE17	1	-	-
		AGE18	7	-	-
		AGE19	7	1	-
		AGE20	1	2	-
	TOTAL	=	16	3	47%
	b. 9pm – 4am	AGE17	0	-	-
		AGE18	5	-	-
		AGE19	8	0	-
		AGE20	1	0	-
	TOTAL	=	14	0	35%
	c. 12pm – 5am	AGE17	0	-	-
		AGE18	1	-	-
		AGE19	3	0	-
		AGE20	0	0	-
	TOTAL	=	4	0	10%
	d. 10pm – 4am	AGE17	0	-	-
		AGE18	1	-	-
		AGE19	1	1	-
		AGE20	0	0	-
	TOTAL	=	2	1	8%
	TOTAL	36		4	100%

The ninth question contains the time when he feels his best to do the activity. The highest result above shows 47 percent who stated that they chose the morning time between 05.00 a.m. to 10.00 a.m. which means students feel that the best time to do their activities is in the morning including 1 female student aged 17 years, 7 female students aged 18 years, 7 female students aged 19 years, 1 female student aged 20 years, 1 male student aged 19 years and 2 male students aged 20 years. On the other hand, there are also 35 percent more students who feel their best is at noon hours to do their best activities.

Table 4.2.10 Students' preference between morning type or evening

Questionnaire	The answers	Female		Male	Percentage
Q10. Which one of these types do you consider yourself to be? (Manakah dari jenis ini yang Anda anggap sebagai diri Anda?)	a. Definitely a morning type (Pasti tipe pagi)	AGE17	0	-	-
		AGE18	3	-	-
		AGE19	8	1	-
		AGE20	1	2	-
	TOTAL	=	12	3	37%
	b. Rather more a morning than an evening type (Agak lebih pagi daripada jenis malam)	AGE17	1	-	-
		AGE18	4	-	-
		AGE19	5	1	-
		AGE20	1	0	-
	TOTAL	=	11	1	30%
	c. Rather more an evening than a morning type (Agak lebih malam dari jenis pagi)	AGE17	0	-	-
		AGE18	4	-	-
		AGE19	4	0	-
		AGE20	0	0	-
	TOTAL	=	8	0	20%
	d. Definitely an evening type (Pasti tipe malam)	AGE17	0	-	-
		AGE18	3	-	-
		AGE19	2	0	-
		AGE20	0	0	-
	TOTAL	=	5	0	13%
	TOTAL NUMBER	36		4	100%

In short, starting from question number one to question ten, a short answer will be taken from the results of the answer to questionnaire number ten which refers to the students' preference for their respective chronotype. On the highest results above showed 37 percent stated that they were really the morning type, 30 percent of the students stated that they were a bit earlier than the evening type, 20 percent of the students stated that they were the late night type rather than the morning type, 13 percent of the students stated that they were really the night type. For this reason, the researcher narrowed down the answer by combining the percent between the answers a with b and c with d, namely 27 students, the percentage of 67 percent was morning type students and 13 students shows that 33 percent were the night type students.

2. Students' motivation to learn English

Measuring student motivation, researcher used a questionnaire adapted from Gardner.[69] There was a slight modification and reduction of the questions aimed at using questions that were related to the students who were the participants of this study. The following is a table of the results of the motivation questionnaire.

Nineteen questions were given by the researcher. The answer choice in the form of a Likert scale has the value of agreeing to disagree 1 to 5. Scale number 1 for strongly disagree, scale number 2 for disagree, scale number 3 for neither agree nor disagree (Half), scale number 4 for agree and scale number 5 for strongly agree.

Table 4.3.1 The use of English in daily live

Q.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	5.0	5.0	5.0
	Disagree	10	25.0	25.0	30.0
	Neither agree nor disagree (Half)	20	50.0	50.0	80.0
	Agree	7	17.5	17.5	97.5
	Strongly agree	1	2.5	2.5	100.0
	Total	40	100.0	100.0	

Starting from the first question, it contains about the daily activities of students using English when talking alone or with someone. The highest answer is number 5 which strongly agrees because they majored in English. So, with the disagreeing answer, they might not like English but they are majoring in English for some reason.

[69] R. C. Gardner, Ph.D., "Attitude/Motivation Test Battery: International AMTB Research Project."

Table 4.3.2 The influence of English with their careers

Q.2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.5	2.5	2.5
	Neither agree nor disagree (Half)	2	5.0	5.0	7.5
	Agree	10	25.0	25.0	32.5
	Strongly agree	27	67.5	67.5	100.0
	Total	40	100.0	100.0	

The second question is about the strength of the English language with your career or your daily life. The highest answer is number 5 which is strongly agree because they are majoring in English then with the answer not agreeing it is possible that they may not like English but they are majoring in English.

Table 4.3.3 The purpose of entering a large company

Q.3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.5	2.5	2.5
	Neither agree nor disagree (Half)	4	10.0	10.0	12.5
	Agree	11	27.5	27.5	40.0
	Strongly agree	24	60.0	60.0	100.0
	Total	40	100.0	100.0	

The third question concerns the need for students to know more about English to enter a large company. The highest answer is number 5, which is strongly agreed because they are in the English department and in the future the possibility of looking for companies whose language is in English circulation.

Table 4.3.4 The use of English for the future

Q.4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.5	2.5	2.5
	Neither agree nor disagree (Half)	4	10.0	10.0	12.5
	Agree	10	25.0	25.0	37.5
	Strongly agree	25	62.5	62.5	100.0
	Total	40	100.0	100.0	

The fourth question regarding the English language will expand the student's future options. The highest answer is number 5 which is strongly agree because once again they are majoring in English and at least they are looking for future options around English.

Table 4.3.5 The use of English when meeting foreigners

Q.5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.5	2.5	2.5
	Neither agree nor disagree (Half)	2	5.0	5.0	7.5
	Agree	12	30.0	30.0	37.5
	Strongly agree	25	62.5	62.5	100.0
	Total	40	100.0	100.0	

The fifth question about English can help them when meeting foreigners. The highest answer is number 5, which is strongly agree because English can guide students when meeting foreigners, especially western people who speak English.

Table 4.3.6 Another thing learned in English

Q.6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.5	2.5	2.5
	Neither agree nor disagree (Half)	4	10.0	10.0	12.5
	Agree	15	37.5	37.5	50.0
	Strongly agree	20	50.0	50.0	100.0
	Total	40	100.0	100.0	

The sixth question about English can help students learn about culture, values and other thoughts. The highest answer is number 5, which is strongly agree by 50 percent because English is usually not only learned about the language but other things are also learned such as cultural values.

Table 4.3.7 The utility of the English language when traveling abroad

Q.7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.5	2.5	2.5
	Neither agree nor disagree (Half)	1	2.5	2.5	5.0
	Agree	8	20.0	20.0	25.0
	Strongly agree	30	75.0	75.0	100.0
	Total	40	100.0	100.0	

The seventh question regarding the English language can help students when traveling abroad. The highest answer is number 5, which is very agreeable by 42 percent and of course English is the international language on flights and on trips abroad. Followed by 15 percent answered number 3 which is moderate.

Table 4.3.8 English for self-development

Q.8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.5	2.5	2.5
	Disagree	2	5.0	5.0	7.5
	Neither agree nor disagree (Half)	6	15.0	15.0	22.5
	Agree	14	35.0	35.0	57.5
	Strongly agree	17	42.5	42.5	100.0
	Total	40	100.0	100.0	

The eighth question about English is important for student self-development. The highest answer is again number 5, which is very agreeable, which is over 42 percent which means that they are indeed learning and expanding their language, especially English.

Table 4.3.9 The perception of other people when speaking English

Q.9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	5.0	5.0	5.0
	Neither agree nor disagree (Half)	16	40.0	40.0	45.0
	Agree	18	45.0	45.0	90.0
	Strongly agree	4	10.0	10.0	100.0
	Total	40	100.0	100.0	

The ninth question is about other people's perceptions about the student having good English proficiency. The highest answer is number 4, which is agreeing to be 45 percent more, which means that they continue to learn English because of the opinions of the people around them. Followed by the answer to number 3, which is moderate.

Table 4.3.10 Students' fear when speaking English

Q.10

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	7.5	7.5	7.5
	Disagree	4	10.0	10.0	17.5
	Neither agree nor disagree (Half)	20	50.0	50.0	67.5
	Agree	10	25.0	25.0	92.5
	Strongly agree	3	7.5	7.5	100.0
	Total	40	100.0	100.0	

The tenth question was about when students speak English, they are not afraid of making mistakes. The highest answer is number 3, which is in the middle of more than 50 percent, which means they are afraid to make mistakes when speaking English, possibly because they are in English and are required to speak fluent and good English.

Table 4.3.11 Students' doubt when speaking English

Q.11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	5.0	5.0	5.0
	Disagree	3	7.5	7.5	12.5
	Neither agree nor disagree (Half)	18	45.0	45.0	57.5
	Agree	9	22.5	22.5	80.0
	Strongly agree	8	20.0	20.0	100.0
	Total	40	100.0	100.0	

The eleventh question is about "When someone speaks English to the student, the student feels nervous. The highest answer is number 3, which is in the middle of more than 45 percent which means they are still nervous when someone speaks English to them.

Table 4.3.12 The easy level of speaking English

Q.12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	7	17.5	17.5	17.5
	Neither agree nor disagree (Half)	23	57.5	57.5	75.0
	Agree	6	15.0	15.0	90.0
	Strongly agree	4	10.0	10.0	100.0
	Total	40	100.0	100.0	

The twelfth question about learning English is easy. The highest answer is number 3, which is in the middle, which is 57 percent more likely to have come from another language, namely English being their third language.

Table 4.3.13 the influence of others on students' speaking English

Q.13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	5.0	5.0	5.0
	Disagree	3	7.5	7.5	12.5
	Neither agree nor disagree (Half)	10	25.0	25.0	37.5
	Agree	12	30.0	30.0	67.5
	Strongly agree	13	32.5	32.5	100.0
	Total	40	100.0	100.0	

The thirteenth question about the people around them encourages them to speak and learn English. The highest answer is number 5, namely in strongly agree with 32 percent more that students are encouraged by people around them such as family and friends to learn English. It is followed by 25 percent or less students who will not encourage people around them to learn English.

Table 4.3.14 Students' purpose of learning English

Q.14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	5.0	5.0	5.0
	Neither agree nor disagree (Half)	8	20.0	20.0	25.0
	Agree	18	45.0	45.0	70.0
	Strongly agree	12	30.0	30.0	100.0
	Total	40	100.0	100.0	

The fourteenth question is about students like to learn English because the teacher and the content are good. The highest answer is number 4, which is agreeing with 45 percent of students preferring speakers of the material and the content of the material in English. Followed by answer number 3, which is moderate by more than 20 percent.

Table 4.3.15 Activities outside school hours learning English

Q.15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.5	2.5	2.5
	Disagree	2	5.0	5.0	7.5
	Neither agree nor disagree (Half)	7	17.5	17.5	25.0
	Agree	14	35.0	35.0	60.0
	Strongly agree	16	40.0	40.0	100.0
	Total	40	100.0	100.0	

The fifteenth question was about students' activities outside the classroom such as watching English films, listening to English songs and reading English books. The highest answer is in number 5, which is strongly agreed that more than 40 percent of students do indeed develop activities for their English language skills so that they can master it by

watching English films, listening to English songs and reading English books.

Table 4.3.16 Students' level of preference in English

Q.16

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	5.0	5.0	5.0
	Neither agree nor disagree (Half)	6	15.0	15.0	20.0
	Agree	7	17.5	17.5	37.5
	Strongly agree	25	62.5	62.5	100.0
	Total	40	100.0	100.0	

Sixteenth question is about students' interest in English. The highest answer is number 5, which is strongly agree with 62.5 percent of more students really like English and indeed learn according to their motivation that they get. But on the other hand, there were some who answered moderately, 15.0 percent and 5.0 percent answered strongly disagree, that they might not like English but entered the English department.

Table 4.3.17 Students' goal of learning English

Q.17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	7	7.5	7.5
	Neither agree nor disagree (Half)	20	50	50.0	57.5
	Agree	11	28	27.5	85.0
	Strongly agree	6	15	15.0	100.0
	Total	40	100	100.0	

The seventeenth question about the practical goals of students learning English such as getting a job and others. The highest answer is number 3, which is moderate by over 50 percent of students. It can be interpreted that students' practical goals of learning English are not merely to get their jobs.

Table 4.3.18 The condition of students learning English

Q.18

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	5	12.5	12.5	12.5
	Neither agree nor disagree (Half)	16	40.0	40.0	52.5
	Agree	12	30.0	30.0	82.5
	Strongly agree	7	17.5	17.5	100.0
	Total	40	100.0	100.0	

The eighteenth question is about the condition of students, where they learn English only when they are still in good shape. The highest answer is in number 3, which is moderate by over 40 percent of students. This means that students can still survive studying when they are not in good shape or are in good shape.

Table 4.3.19 Students' learning English over bedtime

Q.19

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	7.5	7.5	7.5
	Disagree	20	50.0	50.0	57.5
	Neither agree nor disagree (Half)	11	27.5	27.5	85.0
	Agree	6	15.0	15.0	100.0
	Strongly agree	40	100.0	100.0	

The nineteenth question is about the situation of students, where they continue to learn English even though the time that shows their sleeping time.

This question is used as a reference whether the student's chronotype can influence students' motivation to learn English. The highest answer is in number 2, which is moderate by over 50 percent of students. It can be interpreted that students choose to sleep when they are tired and when their sleeping hours have started. The rest, their sleep time is determined by their respective chronotype so that 50 percent more student motivation can be influenced by their chronotype. On the other hand, some children remain motivated or remember their motivation when learning English by 15 percent.

3. Students' chronotype and students' motivation to learn English are correlated

From the results of the Morningness-Eveningness questionnaire and the motivation questionnaire will be accumulated as correlation data. Correlation is carried out using SPSS (*Statistical Product and Service Solution*) tools with the *Bivariate* formula to determine whether there is a relationship between the two variables being tested.

With the addition of the basic formula for decision making, namely the Spearman correlation test, written in the sub-chapter of the analysis technique, namely the correlation of the selected spearman type, is because the data from this study is ordinal data which refers to the measurement scale, for example 1 to 5. It aims to determine the closeness of the variable relationship expressed by the correlation coefficient. This data is part of non-parametric statistics or that does not require assumptions of normality and

linearity. If the significance value < 0.05, it is correlated and if the significance value is more than > 0.05, it is not correlated.

Table 4.4.1 Correlation between chronotype and students' motivation

Correlations			Morningness-Eveningness	Motivation to learn English
Spearman's rho	Morningness-Eveningness	Correlation Coefficient	1.000	-.075
		Sig. (2-tailed)	.	.645
		N	40	40
	Motivation to learn English	Correlation Coefficient	-.075	1.000
		Sig. (2-tailed)	.645	.
		N	40	40

The researcher shows how to explain the correlation table above with three stages, namely seeing the significance value, seeing the closeness of the relationship between the research variables and the direction of the relationship between the two variables. Immediately, the first, the significance value listed shows that 0.645, which means that in the decision making guidelines the significance value of the Spearman correlation is greater than (>) 0.05 and states there is no correlation.

Seeing the closeness of the relationship between the chronotype preference variables of students with students' motivation to learn English

can be seen from the coefficient value of -0.075 which is a really weak relationship. Looking back at the reference, the correlation coefficient is in the correlation coefficient reference menu below 0.00-0.025. This means that there is absolutely no relationship between the two variables in this study.

The last stage of correlation is to look at the direction of the relationship between the two variables from the output table above which shows that the direction of the relationship between the variables is negative, namely -0.075 so that the relationship between the two variables is declared to be included in the unidirectional relationship type. Thus, if the student's learning motivation is low or high, the chronotype that the students have can still be controlled by the students themselves in learning English. Furthermore, students do not need to worry about controlling their chronotype on their motivation to learn English. On the other hand, with positive results it must be considered. With the major in their chosen course, they should be highly motivated and able to control their chronotype.

B. Discussion

The discussion in this chapter discusses the absence of a chronotype relationship with students' motivation to learn English. This study took Horne's chronotype theory to explore the chronotype perceptions of UINSA’s second-semester students in the subject of spoken English and Gardner's motivation theory to explore their motivation to learn English. Thus, it can be correlated

with their theory but on a smaller subject. Researchers use Pearson correlation on ordinal data to test data whether the data has a significant correlation or not. Here's the explanation.

1. Chronotype preferences of students learning English

The data obtained in this study indicate that the UINSA's second semester students in the subject of spoken English give varied reactions to this first questionnaire on chronotype preferences of students. From the data collected, a sampling theory scenario has been determined which refers to taking students aged 17 to 20 years. Researchers have looked at the words from Randler and Frech[70] that many adolescents or early adulthood refers to a type of night because activities that are more than usual include activities in learning or vice versa.

Findings from Preckel et al.[71] mentioned that the morning type has high positive results on students' chronotype awareness for their learning activities and vice versa in the evening type. Compared to this study, the results show that the morning type students' at the school has higher potential than the evening type. The difference can be said that in previous studies that took several subjects such as chemistry, mathematics, language or all of which were summarized in the form of achievement scores that were correlated with the chronotype of students. The motive is to find a correlation between these two variables. Whereas in this study, taking subjects in the subjects adopted did not

[70] Randler C and Frech D, "Correlation between Morningness–Eveningness and Final School Leaving Exams."
[71] Preckel et al., "Morningness-Eveningness and Educational Outcomes."

rule out that many students had good motivation and control over their chronotype. However, it is also possible for those with low motivation to lose when controlling the chronotype.

The difference in participant sampling theory is very visible where they use the formula for the number of samples with deviations a or b with standard proportions. Unlike this study, this study uses a sampling theory that originates from the words of Randler and Frech[72], which says that many adolescents or adulthood refers to the type of last night plus the words of Adan et al.[73] Generally, adolescence lasts between the ages of 17 and 22.

The theory of correlation is known to vary and differ from this research. There are Pearson Chi-Square, regression analysis or ANCOVA, Bonferroni-corrected multiple comparison test and others. Likewise, most of the data on this instrument and previous research instruments were in the form of a scale. In this study, it shows a Likert scale with ordinal data interpreted as Spearman correlation.

This study is similar to Zerbini et al.[74] This study investigates the relationship between chronotype and school performance with the aim of proposing hypotheses about the mechanisms behind this complex phenomenon and finding solutions to optimize the school system. Not much different, the hypothesis in this study is similar, where the results are likely to be positively

[72] Randler C and Frech D, "Correlation between Morningness–Eveningness and Final School Leaving Exams."
[73] Adan et al., "Circadian Typology."
[74] Zerbini and Merrow, "Time to Learn."

correlated. The direction of a positive relationship and researchable things with several subjects or variables are suggestions for future researchers. However, the results in this study indicate a negative correlation direction which also means there is no correlation. The main factors in this study are students' chronotype preferences and motivation to learn English, while in Zerbini et al.[75] studied mixing performance, students' awareness of learning and circadian rhythm clock heart rate in their physical psychology. The result is a chronotype late or not on the chronotype clock. Students appear to be suffering immensely in several areas related to learning and school achievement, such as awareness and motivation.

A counterpart from other research, namely by Afgany[76] with this research. Afghainy examined the chronotype relationship and student achievement in which the use of observational analytic cross sectional approach and purposive sampling technique was used. Afghany's research results show that the majority of respondents have a chronotype in the morning (54%) but only achievement among them (41%), and some of the other respondents have a night chronotype (46%) but also found among those who excel (15%). Turning to this study, it appears that the results state a contra on a positive relationship, this study investigates the chronotype preferences of students and students' motivation to learn English who have morning type results (67%) between the ages of 17 years and 20 years. Accompanied by several morning type students

[75] Ibid.
[76] Afghaniy, "HUBUNGAN ANTARA CHRONOTYPE DENGAN PRESTASI BELAJAR PADA SISWA KELAS XI DI SMAN 1 BOYOLALI."

who could not control the chronotype due to low motivation (5%). For the night type it is (13%) but among those who have the night type there are also (62%) who are motivated and can control their chronotype when studying in the morning or evening where they do not have the greatest feelings. This is most likely because English is their major and most of them are motivated.

2. Students' motivation to learn English

The starting material that will be considered in this section is the sub-motivation of student learning. It is nothing but to check their level of motivation to learn English after knowing their chronotype preference. The way to obtain this data is to use a questionnaire from Gardner[77]. Starting from interest, future plans for what he will learn will be asked in the student motivation session.

The comparison of several previous studies in the literature review chapter is none other than the hypothesis of factors in education such as performance with chronotype and achievement results with chronotype. The results of one of these studies include Beşoluk et al.[78] who said that the morning type achieved higher scores than the students with the evening preference. The refutation of other associations was also found to be stronger on tonight's type, suggesting that the chronotype effect on grades can be mediated by other factors, such as intelligence, academic motivation, and awareness are examples of individual characteristics relevant to getting good grades as suggested by

[77] R. C. Gardner, Ph.D., "Attitude/Motivation Test Battery: International AMTB Research Project."
[78] Beşoluk, Önder, and Deveci, "Morningness-Eveningness Preferences and Academic Achievement of University Students."

Deary, Strand , Smith, and Fernandes.[79] The comparison with this research is that if one of these factors is motivation, there is a positive relationship and then it should be corrected because without motivation it also does not work in a lesson.

This time it is the level of student motivation to learn with student chronotype preferences. In this study, data from the fillers of the motivation questionnaire showed that most of them were motivated (62.5), (15) to choose halfway parts or between high and low about students' motivation to learn English and the residual were less motivated. Possibly because they have no referred to the direction they really want or have not just met the right teacher and motivation who can lift themselves to be even better. Found to be negatively correlated by Preckel et al.[80] with self-reported year-end scores when controlling for other factors relevant to school achievement, such as cognitive ability, awareness and achievement motivation. There was also opposition to the negative results from Preckel's study found a positive correlation to one of the factors that Preckel mentioned.

3. Students' chronotype and students' motivation to learn English are correlated

After seeing the results of the explanation of students' chronotype preferences and English learning motivation in the previous chapter, the

[79] Deary, I. J., Strand, S., Smith, P., & Fernandes, C, "Intelligence and Educational Achievement" 35 (2007): 13–21.
[80] F Preckel et al., "Chronotype, Cognitive Abilities, and Academic Achievement: A Meta-Analytic Investigation," *October 2011* 483-492., no. 5, Learn Individ Differ (n.d.): 21.

accumulated results show that the chronotype relationship between students and student motivation is not correlated because the significance value states 0.645 which means greater than the reference value of the Spearman correlation significance value, namely (>) 0.05 with the degree of negative directional relationship, namely -0.075, which means that the level of the relationship is below the reference value of the Spearman correlation coefficient, which is completely uncorrelated.

In line with this research, several studies have shown that the type of night is smarter (mental speed, working memory) by Roberts and Kyllonen[81] or nighttime is higher in verbal ability voiced by Killgore et al.[82] . Morning-oriented students score lower on inductive reasoning than night-oriented students by Dı´az-Morales and Escribano[83]. This means that the academic correlation of some of these studies is weak. Continued by Preckel et al.[84] reported seven positive and four negative correlations between twilight and cognitive abilities. These things still raise many questions because individuals are indeed different in their lives. Individuals can be viewed from multiple points of view for a particular subject. Therefore, further studies are needed to assess this relationship in more detail.

[81] RD Roberts and PC Kyllonen, "Morningness–Eveningness and Intelligence: Early to Bed, Early to Rise Will Likely Make You Anything but Wise!," *December 1999* 27, no. 6 (n.d.): 1123–1133.
[82] WDS Killgore and DB Killgore, "The Effects of 53 Hours of Sleep Deprivation on Moral Judgement," *March 2007* 30, no. 3 (n.d.): 345–52.
[83] JF Dı´az-Morales and C. Escribano, "Predicting School Achievement: The Role of Inductive Reasoning, Sleep Length and Morningness–Eveningness.," *2013* 106–11. (n.d.): 55.
[84] Preckel et al., "Chronotype, Cognitive Abilities, and Academic Achievement: A Meta-Analytic Investigation."

Regarding the participants it is not balanced because in some previous studies there were more than 100 participants. However, it turns out that after going through the validation and reliability test of the questionnaire and the correlation of the answers, it shows that it can still be used, but it shows results that are beyond the researchers' expectation that the correlation is positive and the results of this study state that there is no total correlation. Researcher have also guessed this in connection with the researcher's experience that students control their chronotype if they are in a supportive atmosphere such as good learning conditions, vice versa after drinking coffee and washing their face for the evening type. In addition, if they are not at their best and the time is not suitable for them in the morning or vice versa, there will be a decrease in mood.

The findings of this study refute the findings from the contrasting findings above but also support the findings of previous studies whose results are uncorrelated or have no relationship with learning factors, especially motivation. This research does mention psychology classes but does not refer to analysis according to psychological context in depth. Researchers choose another way, namely by simply looking for preferences with a questionnaire containing the scale described and then correlated. This contrasts with previous studies that actually measured participants' circadian heart rates and subjects varied, such as not just one subject and student summary scores in one lesson. Thus, the chronotype still has to be controlled by the students and this match can be put forward as a matter of consideration from several groups of

students, teachers and lecturers and educational institutions so that the learning system is more neatly organized.

CHAPTER V

CONCLUSION AND SUGESTIONS

This chapter provides completion of studies that stem from the findings and considerations described in the previous chapters. Coupled with the proposition, the outline is also given and direction for further research from the researcher.

A. Conclusion

In short, after going through the research process above, the researcher described the results of this research that had been carried out in the second semester of UINSA students in the oral English class. Measuring the age range according to theory is the theory sampling scenario which refers to taking students aged 17 to 20 years. Researchers have looked at Randler and Frech's[85] words that many adolescents or early adulthood refers to a type of night because activity that is more than usual includes activity in learning or vice versa. Among these variables is the chronotype with the student's motivation to learn English. The output listed issues a statement that is there is no correlation and is negative towards the correlation coefficient. From the Spearman correlation output, a significance value of 0.645 is obtained, which means it is greater than (>) 0.05 and it is stated that there is no correlation. The struggle for the Spearman correlation coefficient is in the range below 0.00-0.025, namely -0.075, which means there is no correlation at all. The meaning is students do not need to worry about controlling their chronotype

[85] Randler C and Frech D, "Correlation between Morningness–Eveningness and Final School Leaving Exams."

on their motivation to learn English. On the other hand, with positive results it must be considered. With the major in their chosen course, they should be highly motivated and able to control their chronotype. Back before the correlation stage, the chronotype preference output results revealed a number (67%) for the morning type. Accompanied by several morning type students who could not control the chronotype due to low motivation (5%). For the night type, it is (33%) but among those who have the night type there are also (62.5%) who are motivated and can control their chronotype when studying in the morning or evening where they do not have the greatest feelings. This is most likely because English is their adopted major and most of them are motivated. Among the students who are motivated and less motivated, there is also a result that shows the number (32.5%) who chooses to be moderate at their level of motivation to learn English.

B. Suggestions

After shrinking completion, suggestions by researchers have grown including the following:

1. Suggestions for Students

For students who cannot control the chronotype due to daily factors, although the correlation between chronotype and motivation is proven to have no relationship, it is sufficient to wisely rearrange the study schedule with daily activities outside of learning because the schedule on campus is not visible in detail from the chronotype of each student. Chronotype can be controlled by several things including desire

or intention and assisted by things such as immunity that has been trained. So, if the morning type or evening type can still learn English at a predetermined time, even though it is not at the peak of the best feelings for students.

2. Suggestions for Teachers / Lecturers

After knowing the chronotype of students, such as the morning type and the afternoon type, the strategies or methods in each learning activity must also be varied. Although this study did not produce a positive correlation, the counter research stated that what must still be there is the achievement that is well designed by students and guided by the teacher. Teachers must provide motivation every day to encourage students to be more enthusiastic during learning hours.

Additionally, to reduce mismatches between adolescent or adult circadian clocks, school hours could involve light intervention to promote loose time for student breaks and rearrangement of class schedules that are considered to be of high weight at a later date.

3. Suggestions for further research

This study did not actually search for data from psychological methods, namely measuring heart rate and testing in a specified time. There is only chronotype preference data and students' English learning motivation scale. The lack of participants in this study also causes considerable curiosity to researchers as well as major subjects or some

subjects that can be related to this research need to be expanded and become further research.

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