

**AN ANALYSIS OF ONLINE SYNCHRONOUS AND  
ASYNCHRONOUS LEARNING AT ENGLISH STUDY  
PROGRAM IN ISLAMIC UNIVERSITY OF RIAU**

A THESIS



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## ABSTRACT

**Bagus Adhityo, (2021): *An Analysis of Online Synchronous and Asynchronous Learning at English Study Program In Islamic University Of Riau***

**Keyword: Online Synchronous Learning, Online Asynchronous Learning, Learning Media.**

*This study aims to find out students' problems in online synchronous and online asynchronous learning along with the difference between online synchronous learning and online asynchronous learning.*

*This study used a descriptive qualitative method by using interviews and questionnaires as the instrument. The survey was conducted and distributed to students of English education department. Respondent then ask to answer series of questions regarding the aspect of psychological motivation, cognitive problem solving, interaction with instructors, peer collaboration, community support, and learning management. Responses were then analyze to find the main problem for both online synchronous and online asynchronous learning.*

*The result for online synchronous learning, the main obstacle that they face is peer collaboration (57.5%) and psychological motivation (45%). Meanwhile, for online asynchronous learning the problem that students mainly face is learning management (70%) and interaction with instructors (60%). Based on the data and the result of the research as well as the formulation of the problem, it can be concluded that online synchronous learning and online asynchronous learning both have their own advantages and disadvantages that are better suited in certain situations and conditions. On this basis, lecturers and students need to work together to find the best method and media for each of their subjects that are best suited for their needs. students also need to better prepare themselves and be more active in the teaching and learning process in order to keep up with the lecturers' demands.*

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS.....</b>	<b>i</b>
<b>CHAPTER I: INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the problem.....	1
1.2 Setting of the problem.....	5
1.3 Limitation of the problem.....	7
1.4 Formulation of the problem.....	7
1.5 Objective of the research.....	7
1.6 Significance of the research.....	7
1.7 Definition of key term.....	8
<b>CHAPTER II: REVIEW OF RELATED LITERATURE.....</b>	<b>9</b>
2.1 Relevance Theories.....	9
2.1.1 Online Learning.....	9
2.1.2 Online Synchronous Learning.....	12
2.1.3 Online Asynchronous Learning.....	15
2.1.4 Online Learning Media.....	18
1. Messaging Apps.....	18
2. Online Conferencing Apps.....	20
3. Virtual Classroom.....	23
2.2 Relevance Study.....	27
<b>CHAPTER III: RESEARCH METHODOLOGY.....</b>	<b>29</b>
3.1 Research Design.....	29
3.2 Location and Time of Research.....	29
3.3 Population and sample.....	29
3.4 Research Instrument.....	30
3.5 Data Collection Technique.....	30
3.6 Data Analysis Technique.....	31
<b>CHAPTER IV: RESEARCH FINDINGS AND DISCUSSION.....</b>	<b>32</b>

4.1 Data Description.....	32
4.2 Data Analysis.....	32
4.2.1 Interview.....	32
4.2.2 Questionnaire.....	34
4.3 Discussion.....	40
<b>CHAPTER V: CONCLUSION AND SUGGESTIONS.....</b>	<b>46</b>
5.1 Conclusion.....	46
5.2 Suggestions.....	46
5.2.1 For Students.....	47
5.2.2 For English Teachers.....	47
5.2.3 For Future Researcher.....	47
<b>REFERENCES.....</b>	<b>48</b>



# CHAPTER I

## Introduction

### 1.1. Background of the problem

The emergence of COVID-19 forced almost every university not only in Indonesia, but all over the world to shift their learning policy, from face to face or hybrid learning into full online course. Many students and lecturers are having a challenging time in the current situation. Most of the students are not familiar with the applications that are used and need time to get used to the online learning environment. New kinds of problem and obstacles arise, making it harder and harder for everyone involved, but despite all that the teaching and learning process continue.

In Riau Islamic University, the online learning process has been applied since March 2020. The campus was closed off as a preventive measure to stop the spread of Corona virus disease (COVID-19). Lecturers began experimenting with their lessons to find the best methods of online teaching that are sustainable and effective for the students. Despite the shaky start at the beginning, mainly because of technical and resource problems, the teaching and learning process in Riau Islamic University is still running and keeps on getting better. Online learning can be separated into two types of learning, online synchronous learning and online asynchronous learning.

For synchronous e-learning, the process occurs live, real-time, scheduled, with facilitated instruction and learning-oriented interaction. during this form of learning, learning experiences are live and real-time. The roots of synchronous e-learning are derived from three main influences: the classroom, the media, and also the conference. Several researchers provide a comprehensive definition of synchronous online learning, most of them agree that it must include two components. they are interactions and time. Meanwhile, Synchronous e-learning are expanded because of proven demands in various areas like education. within the online educational environment, there's no physical meeting. Learning media that are used in synchronous and asynchronous

online learning, such as Forum discussions, instant messaging and blogs, play an important role in humanizing online courses by replicating the classroom experience of information exchange and social construct, not just between learners and instructors but among the learners further. People might just realize it by regard to a selected vendor, tool or software program that facilitates the creation and delivery of synchronous e-Learning.

Meanwhile, Asynchronous online learning is defined variously because of some components, there are nature and facilities that are common in some characteristics. On the opposite hand, one amongst the popular definitions that target the components of asynchronous e-learning introduced it as an interactive learning community that's not limited by time, place or the constraints of a classroom.

Moreover, Asynchronous e-learning is comparable to synchronous e-learning which could be a learner-centred process which uses online learning resources to facilitate information sharing irrespective of the constraints of your time and place among a network of individuals. Asynchronous e-learning takes advantage of computer-mediated communication (CMC) to realize the guarantees of learning “anytime and anywhere” through asynchronous online discussions. Asynchronous e-learning is on the idea of constructivist theory, a learner-centred approach that emphasize on the importance of peer-to-peer interactions. This approach combines self-study with asynchronous interactions to market learning, it can also be applied to facilitate learning in traditional on-campus or regular education, distance education and continuing education. This combined network of learners and also the network during which they impart are named as an asynchronous e-learning network. The conditions and factors driving the Asynchronous online learning are different so, this method is defined by another component.

For students that are used to study in class, lecturer’s presence is a very crucial component, meanwhile In online learning, *presence* is established differently than in a face-to-face classroom. The Community of Inquiry Model classified the presence into three kinds : teaching, cognitive, and social. Figuring out a way to establish and maintain presence is very important, particularly in the

situation where students are accustomed to seeing the lecturer and asking question directly . The need of social presence is increasingly significant, especially in time such as now, when students are worried about a global crisis, and in a teaching-and-learning context, social presence, direct interaction, and community-building can diffuse tension and increase student motivation.

Community building between student and lecturer is also very important, community building act as a field of practices directed toward the creation and enhancement of community among individuals within a common need or interest. having a sense of community in online classes would help students and lecturers to communicate more effective and smooth, it would also make the student more active to participate in online class and eliminate the feeling of disconnected and creating marginalized individuals.

In addition to the ability and willingness of all parties, the success of online learning is greatly influenced by the purchasing power or budget of teachers and learners of the technological facilities needed. This can be understood because online learning is an application that requires infrastructure support relating to educational institutions, instructors, and learners. In order to make sure the teaching and learning process runs as smoothly as possible without technical disruptions.

There are two basic forms of online learning media: synchronous and asynchronous media. Through synchronous media, the two communicative media primarily synchronize themselves to each other, and then continually send data in 'real time', for example, a one-to-one or group chat using Google meet. Synchronous communication allows for faster data transfer rates than asynchronous methods i.e., lecturer and student are present in the same time in a virtual space. Asynchronous communication implies 'no synchronization, and does not require sending and receiving data in real time. Asynchronous communication is slower than synchronous, for example, e-mail. Therefore, timekeeping through an asynchronous medium requires the coordination of events to operate a system in harmony.



One of the key component of asynchronous learning is interactivity. Students respond to some component of instruction, such as a reading assignment, or a request to respond to a discussion question or complete a tutorial assignment. Students may also communicate with lecturers and peers through media such as email or discussion boards. Another form of asynchronous instruction requires students to participate in some form of online tutorial. Students log into a VLE and participate in a tutorial. Unlike the synchronous classroom environment, students may not have to complete assignments within a specified short time-frame. Students can repeat lessons as many times as necessary. They may also have the choice to complete as much or as little of the assignment depending on the time available to them. Thus, supporting students within specific time-frame is an important activity within e-learning.

The usefulness of asynchronous versus synchronous online learning are still debatable. Asynchronous online learning commonly facilitated by media such as e-mail and discussion boards, supports work relations among learners and with teachers, even when participants cannot be online at the same time. It is thus a key component of flexible online learning. In fact, many people take online courses because of their asynchronous nature, combining education with work, family, and other commitments. Asynchronous learning makes it possible for learners to log on to an e-learning environment at any time and download documents or send messages to teachers or peers. Students may spend more time refining their contributions, which are generally considered more thoughtful compared to synchronous communication

Online learning seems to have left the initial stage, in which researchers tried to determine the medium that works “better”—such studies generally yielded no significant differences. Consequently, instead of trying to determine the best medium, the online learning community needs an understanding of when, why, and how to use different types of online learning. Note also that the users are the ones who decide on how to use a medium. For example, in some instances, e-mail is used near-synchronously when users remain logged in and monitor their e-mail



continuously. Thus, the difference between asynchronous and synchronous e-learning is often a matter of degree.

It must also be realized that the main key in the learning process is still education itself, which contained interaction, both teacher with students and students with students. The role of a teacher which cannot be replaced by technology such as giving direction to students, foster the growth of values and character, evaluate the progress of learning individually, giving guidance about the meaning of life, and develop student creativity and potential.

In conclusion, online synchronous learning and online asynchronous learning have their own advantages and disadvantages that are better suited in certain situations and conditions, and to make the teaching-learning process run as smoothly as possible, teacher and students need to work together and also consider the aspect of learning media, technical issue, and Learning motivation in order to achieve it.

## **1.2. Setting of the Problem**

There are some problems that students commonly encountered during online learning in general, the first is technical issue such as bad connectivity, device malfunction, or insufficient data package. A lot of students are not provided with the high bandwidth or the strong internet connection that online courses require. This resulted in some students not be able to catch up with the others.

The second one is time management, when students study at home or in an environment that are not specifically design to accommodate teaching and learning, there can be more distractions than usual, especially when studying with their phone or computer. And when they are at home with their family it will be hard to focus because their family playing or doing their own job around the house.

The third one is psychological such as decline in motivation, given that students may not be attending class at a set time on a physical campus, finding the motivation to get started on coursework can be quite challenging, it require a

determination and the correct mindset in order to keep studying, especially when they are already falling behind. Students need to find the motivation to follow the new educational trends and also properly equip themselves for future challenges in their education and careers.

The forth is adaptability struggle, transitioning from face to face instructor to computer-based learning in a virtual classroom can be overwhelming to some students since the learning experience are entirely different. It will take sometimes for them to adapt to the online learning environment and get accustomed to online learning. Students with a “traditional” mindset will find it difficult to adapt; however, they need to accept the new learning circumstances with an open mind and heart in order to keep up.

The fifth is interaction, Many students find that learning isn’t just an intellectual activity, but also a social one. the lack of in-person interaction with both instructors and classmates can be particularly dangerous to students and can lead to feelings of isolation and dissociation. Therefore social interaction is equally important not only in the process of learning but also in maintaining the students psychological health.

Last but not least is the learning media and management, the tools that are used to support cooperation, collaboration, and communication in the teaching and learning process. These media allow for the provision of individual amounts of teaching presence, structure, learning and technological support, as well as orientation to new roles, processes, and interaction (dialogue) with the tutor and others. The media can also be use to identify whether a lesson is done synchronously or asynchronously.

Next is for online synchronous learning specifically. The common problems that students encountered are technical and time management, a stable connection is required in order to stay connected during the lesson and performing the task given by the lecturer. students also required to attend the class at the scheduled time in order to be count as attending the class otherwise they are counted as absent.

Meanwhile, in online asynchronous learning, the common problems are lack of social interaction and decline in motivation, students become less motivated to learn and be distracted by other things. Lack of interaction, be it with the lecturer or classmate also contributes to the decline of their mental health. Adaptability is also a factor that is needed to be raised because students and teachers need time to fully adapt to the online learning environment especially when they are using new media that they have never used before.

### **1.3. Limitation of the Problem**

Based on the problem above and because of the limitation of the researcher's time and fund, The researcher will focus on Six factors, such as psychological motivation, cognitive problem solving, interaction with instructors, peer collaboration, community support, and learning management while learning by using online synchronous and asynchronous learning.

### **1.4. Formulation of the Problem**

1. What are students' problem in Online Synchronous and Online Asynchronous learning?
2. What are the differences that students feel while learning with Online Synchronous and Online Asynchronous learning?

### **1.5. Objective of the Research**

1. To find out students' problem in Online Synchronous and Online Asynchronous learning.
2. To find out the differences that students feel while learning with Online Synchronous and Online Asynchronous learning

### **1.6. Benefit of the research**

1. For English teachers

The result of this research are expected to be useful for teachers in supporting the students needs during online learning.

2. For the students

To help students expand their knowledge, solve their problem in adapting to online learning environment and maintaining a positive learning motivation.

3. For the researcher

To fulfill one of the requirement for undergraduate degree of education at English study program of education and teacher training faculty Islamic university of Riau.

### 1.7. Definition of key terms

1. Online learning

Welsh et al. (2003) defined online learning as the use of computer network technology, principally through the internet, to provide information and instruction to individuals.

2. Online Synchronized Learning

Dlab (2020) defined Synchronous learning as learning that “occurs when learners engage in learning within a specific time-frame, but can, depending on the technology, be positioned at various locations”. teacher and students “meet” at the same time online together.

3. Online Asynchronized Learning

According to Malik (2017) Asynchronous learning means that there is no set time for the teaching and learning process to occur. Learners can learn anywhere and can consume their time to gain knowledge of what they want to know and when they need to know. But have to do it within the time limit/deadline.



## CHAPTER II

### Relevance Theories

#### 2.1 Relevance Theories

This chapter discusses the relevant literature and theories that support this research.

##### 2.1.1 Online Learning

The Internet has become one of the vital ways to make available resources for research and learning for both teachers and students to share and acquire information (Richard and Haya 2009). Technology-based learning encompasses the use of the internet and other important technologies to produce materials for learning, teach learners, and also regulate courses in an organization (Fry, 2001). There has been extensive debate about a common definition of the term online learning. Existing definitions according to Dublin (2003) tend to reveal the specialization and interest of the researchers. E-learning as a concept covers a range of applications, learning methods and processes. It is therefore difficult to find a commonly accepted definition for the term online learning or e-learning, and according to Oblinger and Hawkins (2005) and Dublin (2003), there is even no common definition for the term.

Holmes and Gardner (2006) also made a comment on these inconsistencies by saying that there may be as many definitions of the term e-learning as there are academic papers on the subject Dublin (2003) in trying to find a common meaning of the term e-learning went on to ask the following questions: Is e-learning an on-line coursework for students at a distance? Does it mean using a virtual learning environment to support the provision of campus-based education? Does it refer to an on-line tool to enrich, extend and enhance collaboration? OR is it a totally on-line learning or part of blended learning? (Dublin, 2003).

In some definitions e-Learning encompasses more than just the offering of wholly on-line courses. For instance Oblinger and Hawkins (2005) noted that online learning has transformed from a fully-online course to using technology to deliver part or all of a course independent of permanent time and place. Also the European Commission describes, e-Learning as the use of new multimedia technologies and the Internet to increase learning quality by easing access to facilities and services as well as distant exchanges and collaboration.

The following are also different definitions of e-learning. E-learning refers to the use of information and communication technologies to enable the access to online learning/teaching resources. In its broadest sense, Abbad et al (2009), defined E-learning to mean any learning that is enabled electronically. They however narrowed this definition down to mean learning that is empowered by the use of digital technologies. This definition is further narrowed by some researchers as any learning that is internet-enabled or web-based.

According to Maltz et al (2005), the term 'e-learning' is applied in different perspectives, including distributed learning, online-distance learning, as well as hybrid learning. E-learning, according to Oblinger (2005) is defined as the use of information and communication technologies in diverse processes of education to support and enhance learning in institutions of higher education, and includes the usage of information and communication technology as a complement to traditional classrooms, online learning or mixing the two modes. Also according to Wentling et al (2000) the term e-learning refers to the attainment and use of knowledge that are predominantly facilitated and distributed by electronic means. To them, the e-learning depends on computers and networks, but it is likely it will progress into systems comprising of a variety of channels such as wireless and satellite, and technologies such as cellular phones (Wentling et al., 2000).

In their literature review on definitions for e-learning, Liu and Wang (2009) found that the features of e-learning process are chiefly centered on the internet; global sharing and learning resources; information broadcasts and knowledge flow by way of network courses, and lastly flexibility of learning as computer-generated environment for learning is created to overcome issues of

distance and time (Liu and Wang, 2009). Gotschall (2000) argues that the concept of e-learning is proposed based on distance learning, thus a transmission of lectures to distant locations by way of video presentations. Liu and Wang (2009) however claims that the progression of communications technologies, particularly the internet, did transform distance learning into e-learning.

Other researchers also defined e-learning as a revolutionary approach to enable a workforce with the knowledge and skills needed to turn change into benefit. For instance Twigg (2002) described the e-learning approach as centered on the learner as well as its design as involving a system that is interactive, repetitious, self-paced, and customize-able. Welsh et al. (2003) also referred to the term as the use of computer network technology, principally through the internet, to provide information and instruction to individuals

It can therefore be concluded from the above that it is difficult to identify a common definition for e-learning. Some of the authors refer to e-learning as providing complete on-line courses only, while some agree that online learning can also be used for the provision of educational and support processes.

Munir (2008) explained the advantages of E-learning including the following:

1. Providing interesting and meaningful experiences for learners because of their ability to interact directly, so that understanding of the material is more meaningful, easy to understand, easy to remember and easily expressed again.
2. With its varied content, interesting interactions, direct feedback, can improve one's level of understanding and memory of the knowledge conveyed.
3. Online collaboration facilities owned by E-learning facilitate the process of transferring information and communication.
4. Centralized administration and management make it easy to access operations.



5. Learning with the support of internet technology makes the center of attention in learning focused on the learner, and does not depend entirely on the instructor.

### 2.1.2 Online Synchronous Learning

Synchronous virtual classrooms are commonly known as web-conferencing or e-conferencing systems. These systems allow real time communications in which multiple users can simultaneously interact with each other via the Internet to conduct meetings and seminars, lead discussions, make presentations and demonstrations, and perform other functions. Virtual classrooms allow students and instructors to communicate synchronously using features such as audio, video, text chat, interactive whiteboard, application sharing, Google meet, and zoom are synchronous virtual classrooms used in higher education. The features available in a synchronous virtual classroom help the instructor in maintaining interaction during a synchronous session. Martin, Parker, and Deale (2012) studied the importance of interaction within a synchronous virtual classroom. Their results suggested that live communication in a synchronous virtual classroom definitively enhanced interaction.

Most virtual classroom technologies have a content frame to share the instructor's files, an electronic/interactive whiteboard for instructors and students to write or draw, breakout rooms for group activities, text chat to interact using words and emoticons, and audio chat to talk via a microphone or telephone with the instructor and other students. Instructors can administer student polls, share their desktop, or have the students share their own desktops through application sharing. Websites can be displayed for students, and, with stable Internet bandwidth, webcams can be used so students and instructors can see each other.

The entire virtual classroom session can be archived for later use. In recent versions, students can also download archived class sessions. In some cases, students with audio difficulties can dial in using pre-established telephone numbers. Instructors can even call on students to use the electronic/interactive



whiteboard, share their webcam, or speak via the microphone. a lot of researcher supported the use of synchronous audio chat and text chat in their studies. LaPointe, Greysen, and Barrett (2004) found that audio and visual components in synchronous systems help to bridge cultural differences and create communities of practice.

### **The Importance of Online Synchronous Learning**

Although Synchronous online learning is relatively 'expensive', it can be said to be commensurate with its advantages. Cao, Griffin, and Bai (2009) suggested that synchronous interaction effectively raises student satisfaction. In addition, Motteram (2001) stated that "synchronous media are more effective for the 'social' side of education" (p. 131).

Park and Bonk (2007) listed the major benefits of using a synchronous virtual classroom as: providing immediate feedback, encouraging the exchange of multiple perspectives, enhancing dynamic interactions among participants, strengthening social presence, and fostering the exchange of emotional supports and supplying verbal elements. Lietzau and Mann (2009) found synchronous web-conferencing to be an "enhancement to learning in the online environment". Students believed they learned more and earned higher marks when engaged in synchronous classrooms, which offer them an increased opportunity to interact with faculty and other students (Lietzau and Mann, 2009).

The use of synchronous online environments enables students to learn from anywhere, without having to physically travel to a traditional classroom. A voice component, when added into synchronous online classes, provides increased student–student and student– instructor interaction (Martin et al., 2012). Kock (2005) predicted that synchronous communication increases psychological arousal in the learner. Hrastinski (2008) compared asynchronous and synchronous e-learning and found that in synchronous communication, it was possible to monitor the receiver's reaction to a message, which therefore increases arousal and motivation in the learner. He

concluded that synchronous e-learning better supported learners by providing them with social support.

Additionally, synchronous virtual classrooms have an advantage over traditional courses during lecturing. During an interactive synchronous lecture, students can type questions and comments without interrupting the presenter. These questions benefit the students asking them as well as the entire class because every student can see the questions. This builds critical thinking skills by causing them to reflect on the questions and posit answers to them for themselves. It can also draw their attention to material they missed and provide information when the question is answered. Text comments additionally allow students to see the learning status of their peers and gauge their learning comparatively (Marjanovic, 1999).

However, this does require the instructor to multitask by monitoring the text chat or being present in the virtual classroom; not every instructor may be capable of multitasking in this manner. According to Marjanovic (1999), students involved in virtual classrooms improved their problem solving skills, critical thinking, and written communication skills. Synchronous virtual classrooms seem as effective as traditional F2F classrooms in meeting the needs of varying levels and types of students, making them a viable and logical choice for the future of education. Faculty using synchronous virtual classrooms employ a variety of techniques to motivate and instruct students.

Clark (2005) posits four routes to engaging online learners: maintain a lively pace, visualize the content, incorporate frequent participant responses, and use small group break-out rooms. His research also proved that shorter time lengths for classes, such as 60 to 90 minutes, yielded better student perceptions and engagement in material than multiple hour-length sessions.

Researchers have also explored on the importance of synchronous communication. Kock's (2005) media naturalness hypothesis predicts that synchronous communication increases psychological arousal with the ability to convey and observe facial expressions and body language. Robert and

Dennis's (2005) cognitive model of media choice predicts that synchronous communication increases motivation. Hrastinski's (2008) interviews revealed that many e-learners felt that synchronous communication was "more like talking" when compared to asynchronous communication. It appeared more acceptable to exchange social support and discuss less "complex" issues.

### 2.1.3 Online Asynchronous Learning

Asynchronous learning occurs when a student, or lecturer is not present (physically or virtually) for instruction at the same place and time but communication is successfully achieved. The use of asynchronous media in structured courses breaks the traditional paradigm of time and physical space. This creates new educational possibilities and opportunities. Asynchronous instructional materials are accessible from any place at any time. These materials offer students the opportunity to learn at their own convenience (Deal 2002).

An asynchronous mode of learning/teaching has been the most prevalent form of online teaching so far because of its flexible *modus operandi* (Hrastinski, 2008). Asynchronous environments provide students with readily available material in the form of audio/video lectures, handouts, articles and power point presentations. This material is accessible anytime anywhere via Learning Management System (LMS) or various learning media that are readily available online like google class, edlink, edmodo, etc. Some institutions develop their own LMS; others either utilize an open source or purchase an LMS.

Asynchronous e-learning is also the most adopted method for online education because learners are not bounded by time and can respond at their leisure. The opportunity of delayed response allows them to use their higher order learning skills as they can keep thinking about a problem for an extended time period and may develop divergent thinking. The spontaneity of expression is replaced by a constructed response. Therefore, asynchronous space leads to a self-paced, independent, student-centered learning (Murphy, Rodríguez-Manzanares and Barbour, 2011). Hence, asynchronous e-learning can



scaffold students' previous knowledge with new concepts. Less reliance on memory and notes and more opportunity of discussions with peer groups help build critical thinking and deep learning (Huang and Hsiao, 2012). Shyness is reduced due to the distance mode, which alleviates the fear of the teacher. As there is less pressure than a real time encounter, the affective filter remains low and learners can respond with more innovative and creatively. The chances of getting irritated by technological problems like low speed and non-connectivity are minimized, as there are plenty of time available.

Asynchronous e-learning can be challenging as only a carefully devised set of strategies can keep students engaged and interested in this sort of learning environment to facilitate motivation, confidence, participation, problem solving, analytical and higher order thinking skills. Moreover, it is a self-paced system in which the students have to be self-disciplined to keep themselves active as well as interactive to keep track of their activities. Whereas discussions on forums and blogs can keep them active, going off topics can also distract them. Delayed feedback can be another frustrating factor (Huang and Hsiao, 2012). Moreover, there are insufficient opportunities for socializing and students have to look for ways of networking themselves.

According to Perveen (2016), Asynchronous environments provide students with readily available material in the form of audio/video lectures, handouts, articles and power point presentations. This material is accessible anytime anywhere. Some examples of online teaching media that the teacher may use as a media to deliver their lesson such as through Videotape, YouTube, Digital Video Disc (DVD) or Podcast while the students can later respond through the use of communication modes like email. "When the response is delayed, the students use critical thinking more, and the more they think about a problem they construct the response instead of giving a spontaneous answer. Instead while there is a distance the shyness is reduced, and this moderates the fear of the teacher and there is less pressure. (Perveen, 2016, p.22) "Conversely, students enjoy the flexibility and the work at your own pace style provided in asynchronous environments." (Coogler and Floyd, 2015, p.174)



## **The Importance of Online Asynchronous Learning**

According to Garrison and Anderson (2003), e-learning presents unique capabilities and promise to support asynchronous, collaborative communication in a dynamic and adaptable learning environment. In the HE sector, asynchronous learning is a very powerful method of learning. He adds that the associated techniques for using asynchronous learning to support in-class and online instruction attempt to bring learning to life in more innovative ways. According to Clarke (2003), asynchronous learning can promote student exploration and problem solving through:

1. collaborative involvement in authentic methods
2. challenging multidisciplinary tasks by providing realistic complex environments for student inquiry
3. furnishing information and media to support investigation
4. presenting data to support problem solving learning activities

Sims et al. (2002) and Garrison (2003) suggest that asynchronous e-learning methods can create a rich cognitive presence, capable of supporting effective, higher-order thinking. Critical thinking and self-directed learning align with the defining properties of asynchronous online learning. Attention must be given to the opportunity to reflect upon and monitor knowledge (re-)construction as well as the ability to collaborate and manage the learning process.

The properties of asynchronous online learning share similar characteristics of higher-order learning constructs such as reflective inquiry, self-direction and meta-cognition (Sloffer et al. 1999). The close mapping of online learning properties and higher-order learning dimensions suggest considerable potential and promise in informing and guiding effectiveness and efficiency through online asynchronous technologies. Students can communicate and collaborate asynchronously without needing to have a set time available in their daily schedules. Strollberg et al. (2005) describe collaboration as the 'cooperative interactions of individuals to achieving complex objectives'. Student activities are

often actively mediated by peer groups as strong interactions transcend from the traditional classroom. Students in such groups sometimes cooperate to deal with the formal curriculum through collective studying and problem solving techniques within group activities.

#### **2.1.4 Online Learning Media**

Online learning media are tools that are used to support cooperation, collaboration, and communication in the teaching and learning process. These devices allow for the provision of individual amounts of teaching presence, structure, learning and technological support, as well as orientation to new roles, processes, and interaction (dialogue) with the tutor and others. Multimedia principles applicable to online pedagogy are described as the specific characteristics of individual media-based tools. Developments such as new network, inexpensive and more robust hardware, and open-source and social-collaborative tools are discussed. It is very important for distance educators to monitor technological trends in society, as such trends tend to translate rapidly from physical classroom to the virtual classroom. The online learning media are commonly classified into three types of media, such as: Messaging apps, Video Conferencing apps, and Virtual Classroom.

##### **1. Messaging Apps**

Messaging apps are applications and platforms that enable instant messaging. Many such apps have developed into broad platforms enabling status updates, chatbots, payments and conversational commerce (e-commerce via chat). They are normally centralized networks run by the servers of the platform's operators.

The Advantages of messaging apps such as students that are reluctant to speak up in face-to-face discussions can find their voice in online discussions. Students have time to reflect upon and research their responses providing higher quality online discussions. Furthermore, research by Repman (2005),

found that asynchronous discussion participation enhanced higher-order thinking skills.

But despite all that, messaging apps can also bring in some disadvantages such as when some students fail to participate in online discussions. Grading online discussions can be time consuming and challenging for the online instructor. Also, if guidelines for discussion postings are not clear, student responses may be trivial not furthering the discussion.

Some examples of popular messaging apps include WhatsApp, Facebook Messenger, China's WeChat and QQ Messenger, Telegram, Viber, Line, and Snapchat. The popularity of certain apps greatly differ between different countries. Certain apps have emphasis on certain uses - for example Skype focuses on video calling, Whatsapp focuses on messaging and file sharing for work teams, and Snapchat focuses on image messages. Here in UIR, the 3 most commonly used messaging Apps to support the learning process is Whatsapp, Line and Telegram.

#### 1. Whatsapp

WhatsApp Messenger, or simply WhatsApp, is an American freeware, cross-platform centralized messaging and voice-over-IP (VoIP) service owned by Facebook, Inc. It allows users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other content. WhatsApp's client application runs on mobile devices but is also accessible from desktop computers, as long as the user's mobile device remains connected to the Internet while they use the desktop app. The service requires each user to provide a standard cellular mobile telephone number for registering with the service. WhatsApp has become a shared platform that enhances accessibility, encourages cooperation, and intensifies motivation to take an active part in academic assignments (Bere, 2013:2,19).

#### 2. Line



LINE is a freeware app for instant communications on electronic devices such as smartphones, tablet computers, and personal computers. LINE users exchange texts, images, video and audio, and conduct free VoIP conversations and video conferences. In addition, LINE is a platform providing various services including digital wallet as LINE Pay, news stream as LINE Today, video on demand as LINE TV, and digital comic distribution as LINE Manga and LINE Webtoon. The service is operated by LINE Corporation, a Tokyo-based subsidiary of Softbank Group.

### 3. Telegram

Telegram is a freeware, cross-platform, cloud-based instant messaging (IM) software and application service. The service also provides end-to-end encrypted video calling, VoIP, file sharing and several other features. It was initially launched for iOS on 14 August 2013 and Android in October 2013. The application servers of Telegram are distributed worldwide to decrease data load, while the operational center is currently based in Dubai. Various Telegram client apps are available for desktop and mobile platforms including official apps for Android, iOS, Windows, macOS and Linux, as well as for the now-discontinued Windows Phone. There is also an official web interface and numerous unofficial clients that make use of Telegram's protocol. All of Telegram's official components are open source, with the exception of the server which is closed-sourced and proprietary.

## 2 Video Conferencing apps

Video conferencing is a type of online meeting where two or more people engage in a live audio-visual call. With a strong internet connection, the participants can see, hear, and talk to each other in real time, no matter where in the world they are. Video conference is part of web conferencing, it is made possible by the vast development of Internet technologies. Services



may allow real-time point-to-point communications as well as multicast communications from one sender to many receivers.

Video Conferencing also offers data streams of text-based messages, voice and video chat to be shared simultaneously, across geographically dispersed locations. Applications for video conferencing include meetings, training events, lectures, or presentations from a web-connected computer to other web-connected computers.

In addition to the convenience that online learning offers, instructors and students alike can benefit in multiple ways from classroom video conferencing such as:

**Content sharing:** Rather than simply emailing files to students or posting them on a classroom portal online, video conferencing gives teachers and students the ability to share documents and files in real-time.

**Connect participants:** Social distancing, and distance learning, can lead to feelings of isolation. Video conferencing applications facilitate interaction by bringing people together. This tool can also connect participants from all over the world, making it possible to engage local students as well as international students.

**Recording functionality:** Another benefit of video conferencing is that it allows participants to record the lecture or lesson for future reference. While this feature isn't used much when video conferencing is used in primary grades instruction, it can be beneficial for high school and college students who are using online learning tools. This gives students another means to help with studying and exam preparation.

**Engage others:** In addition to uniting students and teachers, video conferencing may be employed to bring in guest lecturers and other subject matter experts. Whether an expert is physically located in the

same town or is halfway across the globe, video conferencing can bring everyone to the same (virtual) table.

Interaction and collaboration: Perhaps the biggest benefit of video conferencing in education is the fact that it encourages interaction and collaboration between students and teachers. In turn, this could make students more motivated and engaged in their learning experience.

The most commonly used video conferencing apps in Riau Islamic University are Google meet and Zoom, those application are used to support synchronous online learning that occurs live and connect the students and lecturer directly through one video conference where students and lecture can communicate to each other in real time. Because of the teaching and learning process that happened simultaneously, it is very prone to technical issues that may disrupt and hinder the teaching and learning process.

#### 1. Zoom

Zoom Video Communications, Inc. (stylized as zoom or simply Zoom) is an American communications technology company headquartered in San Jose, California. It provides video call and online chat services through a cloud-based peer-to-peer software platform and is use for teleconferencing, telecommuting, distance education, and social relations.

However, Zoom has been criticized for "security lapses and poor design choices" that have resulted in heightened scrutiny of its software. The company has also been criticized for its privacy and corporate data sharing policies. Security researchers and reporters have criticized the company for its lack of transparency and poor encryption practices. Zoom initially claimed to use "end-to-end encryption" in its marketing materials, but later clarified it meant "from Zoom end point to Zoom end point" (meaning effectively

between Zoom servers and Zoom clients), which The Intercept described as misleading and "dishonest".

## 2. Google Meet

After becoming an invite-only and secretly releasing the iOS app in February 2017, Google officially launched Meet in March 2017. The service was launched as a video conferencing app for up to 30 attendees, which is described as an enterprise-friendly version of Hangouts. It has launched with web application, Android application, and iOS application.

During the 2020 COVID-19 pandemic, Meet usage grew by a factor of 30 between January and April 2020, with 100 million users a day accessing Meet, compared to 200 million daily uses for Zoom in the last week of April 2020.

## 3. Virtual Classroom

A virtual classroom is a digital learning environment that enables teachers and students to connect online in real time. Virtual classrooms utilize video conferencing, online whiteboards and screen sharing to allow educators to hold live lectures, consultation, and discussions with students in an interactive setting. Virtual classrooms are meant to replicate the experience of physical classrooms, with the added benefits of file sharing, instant feedback and interaction that are ideal in distance learning situations.

Furthermore, virtual classroom specifically refers to an online system that enables students and teachers to communicate and collaborate. Virtual classrooms are typically cloud-based learning solutions that are part of larger learning management systems (LMS). They are highly customize-able and are accessible to users on a variety of devices, like smartphones, tablets and laptops. The example of virtual classroom that are commonly used in UIR is Google class, Edmodo and Cerdas.

## **1. Google Classroom**

Google Classroom is a free web service developed by Google for schools that aims to simplify creating, distributing, and grading assignments. The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students. It is estimated between 40 to 100 million people use Google Classroom.

Furthermore, Google Classroom integrates Docs, Sheets, Slides, Gmail, and Calendar into a cohesive platform to manage student and teacher communication. Students can be invited to join a class through a private code, or automatically imported from a school domain. Teachers can create, distribute and mark assignments all within the Google ecosystem. Each class creates a separate folder in the respective user's Drive, where the student can submit work to be graded by a teacher. Assignments and due dates are added to Google calendar, each assignment can belong to a category (or topic). Teachers can monitor the progress for each student by reviewing revision history of a document, and after being graded, teachers can return work along with comments.

## **2. Edmodo**

Edmodo is an educational technology company offering a communication, collaboration, and coaching platform to K-12 schools and teachers. The Edmodo network enables teachers to share content, distribute quizzes, assignments, and manage communication with students, colleagues, and parents. Edmodo is very teacher-centrist in their design and philosophy: students and parents can only join Edmodo if invited to do so by a teacher. Teachers and students spend large amounts of time on the platform, both in and out of the classroom. Edmodo is free to use, but it also offers premium services.

## **3. Cerdas**



Cerdas (Center of E-Learning and Educational for Students) is a web-based system that is intended to support the online learning process of Riau Islamic University's Students, especially during the Covid-19 Pandemic in the even semester of the 2021/2022 academic year. Cerdas was launch online on the 11th of March 2021 by UIR's Rector Prof. Dr. H Syafrinaldi on the Second Floor of the Rectorate Building, Riau Islamic University, Pekanbaru. Through Cerdas, The University can easily monitor the learning process of lecturers and students.

Cerdas also has advantages over other learning media that have been used by lecturers and students to study. Among these advantages are integration and flexibility. Cerdas is integrated with the SIKAD (Academic Information System) of the Riau Islamic University. Smart also has a live feature (video conference) that is connected to google meet and can be easily monitored by UIR's quality agencies.

According to Motteram (2001) in the Australian Journal of Educational Technology, synchronous media are more effective for the 'social' side of education and that asynchronous media are better at dealing with the 'academic' aspects of the course. Cao, Griffin and Bai (2009) suggest that improving student satisfaction with synchronous interactions will effectively raise overall student satisfaction with course Web sites. Computerized instruction that is exclusively asynchronous cannot possibly convey any kind of immediacy. Many students will lose the intellectual thread and the urge to follow the information exchange if it takes days or even hours for students to get a response to a question.

Collis (1996) identified four significant advantages of synchronous over asynchronous systems:

1. Motivation - synchronous systems focus the energy of the group
2. Telepresence - real time interaction builds a sense of social presence and involvement and helps to develop group cohesion

3. Feedback - synchronous systems provide quick feedback on ideas and support consensus and decision making
4. Pacing - synchronous events encourage people to keep up-to-date and provide a discipline to learning which helps people to prioritize their studies

Corbeill (2006) added two additional advantages to the list.

1. Spontaneity - synchronous events make it easy to add new ideas to the conversation, brainstorming or decision making is well supported.
2. Familiarity - synchronous systems can simulate a more traditional environment. Thus synchronous technologies are important for online education.

Despite all that, asynchronous media are considered to be more time and cost efficient, especially when compared to a classroom setting. It also affords students the opportunity to repeat concepts as often as necessary for learning to occur (Deal 2002). It is also suggested that students are more comfortable writing than talking in a class and therefore may become more involved in online groups. This allows students to publish comments online having time to reflect and articulate.

There are also numerous benefits to using asynchronous media. Asynchronous media can be used to enhance the learning environment. Students can participate in groups. Students find it difficult in the traditional classroom environment to get together in groups to work on activities that promote learning communities. Asynchronous online media allow students to collaborate at any time, in traditional or online classes, at times suited to their own schedules. Asynchronous media also provide flexible methods of learning which allows students to learn at their own pace (Deal 2002). In addition it does not present any opportunities for preconceived notions of race, color, or sex.

Through the use of asynchronous media, online resources can be shared quickly and accurately, for example file transfer protocol (FTP). This offers flexibility on the process of learning through the use of Web technologies. Lecturers and students may feel less anxious about time being wasted, for example, in the event of a class being canceled if they can report such incidence via asynchronous media. Communications can go beyond the 'bricks and mortar' of the classroom. Students from all over the world can discuss topics of common interest without regard to differences in time zones. This has the advantage from the college's perspective in offering an online course to a vast number of students situated around the world.

In addition, students in need of support can be identified by their participation (or lack of participation) within VLEs and personalized attention can be given to them, to enhance a student's learning potential. This may be facilitated through the use of online discussions which can be organized by topic that can make the filtration of information easier and allowing more time for the student to digest and contribute to the information (Kay 2006). Asynchronous media, for example email, also afford the use of attachments which allows for increased transmission of data. The advantages of asynchronous media have paved the way for some developments towards the evolution of e-learning. However there are a number of drawbacks to asynchronous media.

## **2.2 Relevance Studies**

In previous study, Han (2013) found that regarding utilization of video conferencing at higher education level with synchronous instruction use of videos impacts the learners' feeling of association with their instructor. Han found that in courses that included teacher videos, as compared to the courses that did not utilize videos, students could overcome the feeling of being at distance from the instructor. This is very impactful towards students because it increase students' social interaction and motivation.

Arbaugh (2004) found that many individuals that participated in asynchronous online courses are mostly clueless about it. the experience involved in developmental process for understanding and becoming an active learner was totally new for them. Most of the individuals need to modify their role as online learner and their assumption regarding the role of their instructor. From this research it shows the importance of adaptability, not only for the students but also for the teacher to make the teaching and learning process running more naturally.

Mohd Salman and Aziah (2012) in their study further discuss that not all students prefer learning online especially those learning engineering. However, it is still possible to have online interactive lesson and materials. It shows that depending on the subject that are taught, some subject can be really difficult to teach online, but regardless it is still possible to do albeit require more effort and hard work. Instructor needs to have an understanding of when, why, and how to use different types of e-learning in order to utilized online learning efficiently.



## Chapter III

### Research Methodology

#### 3.1. Research Design

This research design of this study has been conducted by using descriptive qualitative research. Kriyantoro (2007) said that, "*qualitative research that aims to explain phenomena by collecting data as deep as possible*". Qualitative research emphasizes the depth of data obtained by researcher. The deeper and more detailed the data obtained, the better the quality of this qualitative research. Descriptive research is research that is conducted to describe a variable, either one or more variables (independent) , or variables that are connected to one other variable (Sugiyono, 2009). The research belongs to descriptive qualitative design because it is intended to find out students' problem in Online Synchronous and Online Asynchronous learning along with the difference between Online Synchronous learning and Online Asynchronous learning.

#### 3.2. Location and Time of Research

The study was conducted in Islamic university of Riau, Faculty of education and teacher training, English education program, for approximately 1 month. Starting from the end of the fourth semester in august.

#### 3.3. The Population and sample of the Research

This research observed the students of fourth semester at English Study Program in UIR, their preferred media for online learning, adaptability struggles and motivation. Because of the limitation of time and fund, From 100 students in the fourth semester, researcher will only take about 20 sample, which is around 20% of the population.

### **3.4. The Instrument of the Research**

To obtain data in accordance with the research objectives the researcher are using interviews and questionnaires as the instrument of the research.

#### **3.4.1. Interview**

Interviews were conducted with questions and answers directly to the research subject. Interviews in this study were conducted to find out more about their online learning habit, the process and overall condition of the online class. Interviews are consist of eight questions, regarding students experience in online learning class at University Islam Riau.

#### **3.4.2. Questionnaire**

The questionnaire is a number of written questions that are used to obtain student information. These questions are answered in accordance with their personalities or things that they know about. Questionnaires for this research consist of 24 questions. With four options; such as Rarely, Sometimes, Often, and Very Frequently.

### **3.5. Data Collection Technique**

#### **1. Formulating question**

The researcher start by formulating the question for the interview and questionnaires based on indicator from Jeongju lee (2019).

#### **2. Select participants and instruments.**

Next, researcher ask the volunteer/interviewee to do a voice call, and then write down their respond and compile it into a transcript. The result of the interview are used to support the questionnaires and to get a more open answer from the students.

For the questionnaires, researcher upload the questionnaires on google form in form of online questionnaire and distribute the link to the students of English study program in UIR through email and Whats-app group.

The researcher then take questionnaires and interview results that contain all of the samples' respond and gathered it in form of transcript to be analyze in the next process.

Researcher will then compile all the data that were gathered from google form and analyze it. For questionnaires, researcher will calculate which indicators have the most "rare" answer to find out what problem that students at University Islam Riau faced in online synchronous and online asynchronous learning.

### **3.6. Data Analysis Techniques**

In analyzing the data, researcher used the theory of Miles, Huberman and Saldana (2014), suggesting that the activity in data analysis consists of three procedures. Below the details of the theory are shown in the chart as follows;

#### **Data Reduction**

Data reduction is the process of selecting, focusing, simplifying, searching for themes and patterns and neglecting needed. (Miles, Huberman and Saldana : 2014). In this step, the researcher focused on the indicator of the research such as the media, time, adaptability, social interaction, and motivation aspect.

#### **Data Display**

The data display phase is done in the form table with descriptions using original text, which can be also in the form of graphs. In the second step, the researcher will present the data by simplifying the data by using original text in the form of descriptive text.

#### **Conclusion/Verification**

In the last step of analyzing data is conclusion. The researcher concluded the main points from all the data that has been collected based on the indicator of the research, so that it will become clear. The conclusions will be an answer of the formulation of problem in the beginning.

## CHAPTER IV

### RESEARCH FINDINGS AND DISCUSSION

#### 4.1 Data Description

The research conducted by using descriptive qualitative method through questionnaire and interview that are conducted online as the instruments to gather all the data. The subject of the data are the fourth semester of English language education study program in Riau Islamic University of Riau. The researcher took 20 students as the sample for this research. In this research, the researcher shows the gathered data in to two groups, Online Synchronous and Online Asynchronous learning. The indicator that were discussed including psychological motivation, cognitive problem solving, interaction with instructors, peer collaboration, community support, and learning management with online synchronous and asynchronous learning.

#### 4.2 Data Analysis

The researcher shows the result of the interview and questionnaire to draw the conclusion based on the answer given. Data analysis takes the form of the descriptive analysis. the study's analysis was based on data collected from the questionnaire and interview that are classified by the indicator that are discussed.

##### 4.2.1 Interview

The interview consists of 8 questions related to the indicator of the research that aims to figure out students' problems regarding online synchronous learning and online asynchronous learning, based on their experience in class.

For the first question, the responses are mainly about technical stuff such as internet connection and the time punctuation of online synchronous learning, Students can be considered to be absent if you are more than 15minutes late.



For the second question, the problem that students encounter in online asynchronous learning according to the interviews, such as keeping up with the deadline of assignments, missing teacher role and lack of communication with lecturer.

The third question is regarding the physical motivation of the students. Student tend to be more motivated when they are put in comfortable environment, for online synchronous learning, according to the interview, the problem that they face regarding their motivation such as being force to pay attention to the teacher for the full duration of the lesson and lack of communication with the classmate. Meanwhile, for asynchronous learning, students tend to get distracted easily when studying alone especially with computer and the lack of teacher presence to guide them.

The fourth question is regarding Peer collaboration. According to the interview, students collaborate more often in online synchronous learning because the task are mainly a group assignment that require them to present a power point presentation together as a group compared to asynchronous learning that are more into individual assignment.

The fifth question is about Cognitive skill of the students. According to the interview, both synchronous learning and asynchronous learning have their own way or aspect to improve students cognitive skills.

The sixth question is regarding interaction with instructor. According to the interview, students interact more with their lecturer in online synchronous learning compared to asynchronous learning because the teacher can respond directly, students are preferred to interact with their friend first in asynchronous learning.

The seventh question is about community support. According to the interviews, students feel more support in synchronous online learning because they can communicate more often directly compared to asynchronous learning that are more passive in communication.

The last question is about the learning management of the students. According to the interviews, students tend to manage their learning schedule and study independently to prepare for synchronous online learning compared to asynchronous online learning.

#### 4.2.2 Questionnaire

The researcher gave the students questionnaires that consist of 24 questions. The purpose of the question is to support the interview and find out the problem that students commonly face in online synchronous and online asynchronous learning based on their experience in class. Questions are grouped by their corresponding indicators where responses are displayed on tables with the following options: Rarely, Sometimes, Often, and Very Frequently.

##### 1. Psychological Motivation

**Table 4.1**

<b>In Online Synchronous Learning</b>					
No.	Question	Rarely	Some -times	Often	Very Frequently
1	Do you enjoy online learning?	50%	20%	20%	10%
2	Do you feel motivated when doing online learning?	40%	30%	20%	10%
AVERAGE		45%	25%	20%	10%

The result from the first and second questions regarding the psychological motivation of the students in synchronous online learning. 45% of the students rarely enjoyed synchronous online learning. 25% of the students chose "sometimes". Meanwhile, the other 20% of the students enjoyed online synchronous learning and chose the option "often". And the

rest 10% of the students also agreed that they Very Frequently enjoyed online synchronous learning.

**Table 4.2**

<b>In Online Asynchronous Learning</b>					
No.	Question	Rarely	Some -times	Often	Very Frequently
1	Do you enjoy online learning?	10%	20%	45%	25%
2	Do you feel motivated when doing online learning?	10%	30%	35%	25%
<b>AVERAGE</b>		10%	25%	40%	25%

On the other hand, for online asynchronous learning, 15% of the students chose the option rarely enjoyed asynchronous online learning. 25% of the students chose "sometimes". 40% of the students often enjoyed online asynchronous learning. And the rest 20% of the students also agreed that they Very Frequently enjoyed online asynchronous learning.

## 2. Peer Collaboration

**Table 4.3**

<b>In Online Synchronous Learning</b>					
No.	Question	Rarely	Some -times	Often	Very Frequently
3	How often do you ask or answer to questions from your friend?	45%	30%	15%	10%
4	How often do you work/learn together with your classmate/group?	70%	20%	10%	0%
<b>AVERAGE</b>		57.5%	25%	22.5%	5%

The result from the third and fourth questions regarding peer collaboration of the students in synchronous online learning. 57.5% of the students rarely ask or answer questions from their friends. 25% of the students chose "sometimes", 22.5% of the students chose "often", and the rest



5% of the students agreed that they Very Frequently collaborate with their classmates in online synchronous learning.

**Table 4.4**

<b>In Online Asynchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
3	How often do you ask or answer to questions from your friend?	5%	25%	30%	40%
4	How often do you work/learn together with your classmate/group?	10%	20%	40%	30%
AVERAGE		7.5%	22.5%	35%	35%

Meanwhile, for online asynchronous learning, 7.5% of the students admit that they rarely ask or answer questions from their friends. 22.5% of the students chose the option "sometimes", 35% of the students chose "often", and the rest 35% of the students Very Frequently collaborate with their classmates in online asynchronous learning.

### 3. Cognitive Problem Solving

**Table 4.5**

<b>In Online Synchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
5	Do you feel inspired when doing online learning?	10%	20%	35%	35%
6	Did you get to apply the knowledge that you get from the online lesson?	5%	25%	40%	30%
AVERAGE		7.5%	22.5%	37.5%	32.5%

The result from the fifth and sixth questions regarding Cognitive Problem Solving of the students in synchronous online learning. 57.5 of the students

rarely feel the benefit. 22.5% of the students chose "sometimes", 37.5% of the students chose "often", and the rest 32.5% of the students agreed that online synchronous learning Very Frequently helps them in improving their Cognitive Problem-Solving skills.

**Table 4.6**

<b>In Online Asynchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
5	Do you feel inspired when doing online learning?	15%	25%	30%	30%
6	Did you get to apply the knowledge that you get from the online lesson?	10%	20%	30%	40%
AVERAGE		12.5%	22.5%	30%	35%

Meanwhile, for online asynchronous learning, 12.5% of the students admit that they rarely feel the benefit towards their Cognitive Problem-Solving skills. 22.5% of the students chose the option "sometimes", 30% of the students chose "often", and the rest 35% of the students agreed that online asynchronous learning Very Frequently helps them improve their Cognitive Problem-Solving skills.

#### **4. Interaction with Instructor**

**Table 4.7**

<b>In Online Synchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
7	Do you communicate with your instructor?	10%	20%	35%	35%
8	How often do you ask question in class?	25%	20%	35%	20%
AVERAGE		17.5%	20%	35%	27.5%

The result from the seventh and eighth questions regarding Interaction with the Instructor by the students in synchronous online learning. 17.5% of the students rarely interact with their instructor. 20% of the students chose "sometimes", 35% of the students chose "often", and the rest 27.5% of the students agreed that they Very Frequently interact with their instructor in online synchronous learning.

**Table 4.8**

<b>In Online Asynchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
7	Do you communicate with your instructor?	70%	20%	10%	0%
8	How often do you ask question to the lecturer?	50%	25%	15%	10%
AVERAGE		60%	22.5%	12.5%	5%

Meanwhile, for online asynchronous learning, 60% of the students admit that they rarely interact with their instructor. 22.5% of the students chose the option "sometimes", 12.5% of the students chose "often", and the rest 5% of the students that they Very Frequently interact with their instructor in online asynchronous learning.

## 5. Community Support

**Table 4.9**

<b>In Online Synchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
9	Do you tend to be active in class?	60%	25%	10%	5%
10	How often do you interact with your classmate?	50%	20%	10%	20%
AVERAGE		55%	22.5%	10%	22.5%

The result from the ninth and tenth questions regarding Community Support of the students in synchronous online learning. 55% of the students rarely feel the support of the community. 22.5% of the students chose "sometimes", 10% of the students chose "often", and the rest 22.5% of the students agreed that they Very Frequently feel supported by the community in online synchronous learning.

**Table 4.10**

<b>In Online Asynchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
9	Do you tend to be active in class?	20%	30%	30%	20%
19	How often do you interact with your classmate?	10%	5%	15%	70%
AVERAGE		15%	17.5%	22.5%	45%

Meanwhile, for online asynchronous learning, 15% of the students admit that they rarely feel the support of the community. 17.5% of the students chose the option "sometimes", 22.5% of the students chose "often", and the rest 45% of the students agreed that they Very Frequently feel supported by the community in online asynchronous learning.

## 6. Learning Management

**Table 4.11**

<b>In Online Synchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
11	How often do you do a self-directed study?	20%	30%	10%	40%
12	Do you manage your own learning schedule?	20%	30%	25%	25%
AVERAGE		20%	30%	17.5%	32.5%



The result from the eleventh and twelfth questions regarding Learning Management of the students in synchronous online learning. 20% of the students rarely manage their own learning. 30% of the students chose "sometimes", 17.5% of the students chose "often", and the rest 32.5% of the students agreed that they Very Frequently manage their own learning in online synchronous learning.

**Table 4.12**

<b>In Online Asynchronous Learning</b>					
No.	Question	Rarely	Some-times	Often	Very Frequently
11	How often do you do a self-directed study?	40%	25%	20%	15%
12	Do you manage your own learning schedule?	30%	30%	20%	20%
AVERAGE		70%	27.5%	20%	17.5%

Meanwhile, for online asynchronous learning, 70% of the students admit that they rarely feel the support of the community. 27.5% of the students chose the option "sometimes", 20% of the students chose "often", and the rest 17.5% of the students agreed that they Very Frequently manage their own learning in online asynchronous learning.

### 4.3 Discussion

Based on the data analysis, there are six indicator such as psychological motivation, cognitive problem solving, interaction with instructors, peer collaboration, community support, and learning management. Those indicator then applied into two groups of online learning method; online synchronous and asynchronous learning.

## Finding Statement

Figure 4.3.1

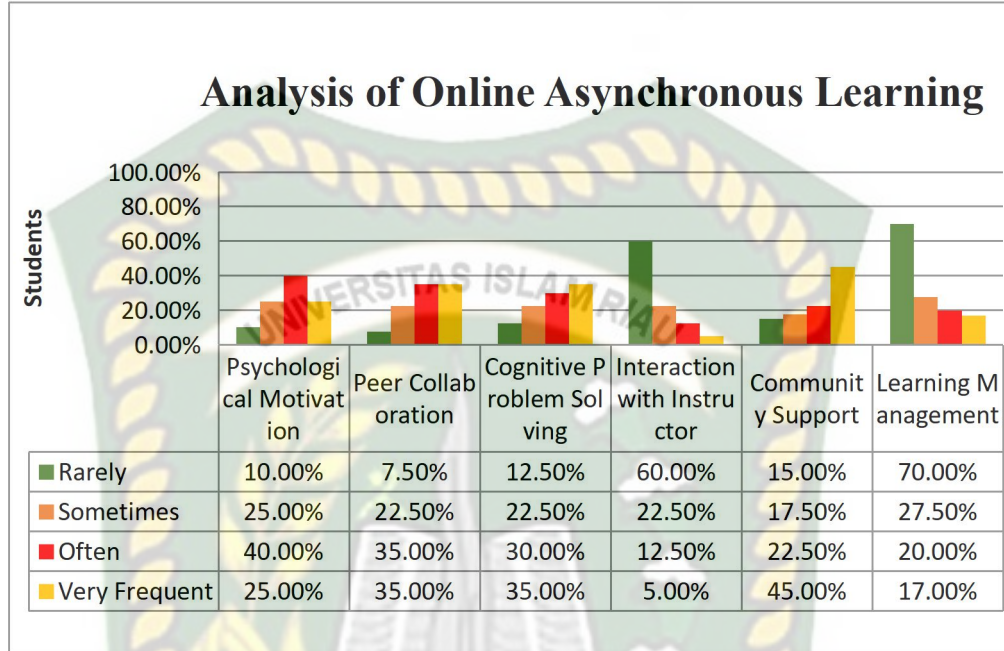
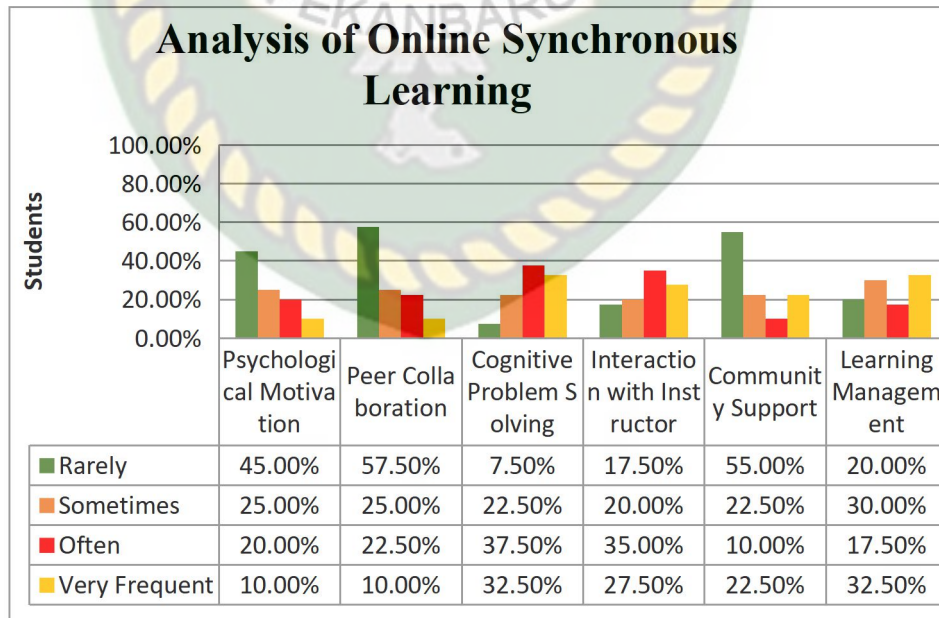


Figure 4.3.2



## 1. Psychological Motivation

The psychological motivation factor represents learners' thoughts or feelings, such as interest, expectations, and motivation that is related to online learning. Learning motivation and learning expectations are essential for a higher level of learning activities in online learning environments. For online synchronous learning, 45% of the students chose "rarely". 25% of the students chose "sometimes". 20% of the students chose "often". And the rest 10% of the students chose "Very Frequently". Meanwhile, For online asynchronous learning, 10% of the students chose "rarely". 25% of the students chose "sometimes". 40% of the students chose "often". And the rest 25% of the students chose "Very Frequently". this shows that psychologically wise, students tend to be more motivated and enjoy learning asynchronously than synchronously. these findings are in line with the finding by Yong-Ming Huang (2015), that synchronous design was not particularly helpful in motivating students' learning when compared to asynchronous design.

## 2. Peer Collaboration

The Peer Collaboration factor refers to activities in which learners discuss knowledge and collaboratively solve problems. Collaborative learning is a process of building and understanding knowledge with peers, and it is recognized as an important part of student engagement. As collaborative learning and interaction are becoming increasingly important in the e-learning environment, it is imperative that collaborative learning emerged as a separate factor in this study. For online synchronous learning, 57.5% of the students chose "rarely". 25% of the students chose "sometimes". 22.5% of the students chose "often". And the rest 5% of the students chose "Very Frequently". Meanwhile, For online asynchronous learning, 7.5% of the students chose "rarely". 22.5% of the students chose "sometimes". 35% of the students chose "often". And the rest 35% of the students chose "Very Frequently". this shows that students tend to be less communicative with their peers in the presence of the lecturer compared to



online asynchronous learning where there is no direct communication between lecturer and students during the class. These findings are in line with the finding by Nikmah (2020), which concluded that asynchronous online learning is often used to share learning objects like materials, assignments, and tests. In other words, it is a passive way to teach and learn because there is no direct communication between lecturer with students and more into peer collaboration among students.

### **3. Cognitive Problem**

Cognitive problem solving represents the process of acquiring, understanding, and utilizing knowledge. These are important factors because they affect learning achievement. Items in this factor, such as approaching, structuring, analyzing, and applying knowledge, are consistent with cognitive process-related activities in three types of e-learning activities (e.g., absorb-type, do-type, and connect-type activities). For online synchronous learning, 7.5% of the students chose "rarely". 22.5% of the students chose "sometimes". 37.5% of the students chose "often". And the rest 32.5% of the students chose "Very Frequently". Meanwhile, For online asynchronous learning, 12.5% of the students chose "rarely". 22.5% of the students chose "sometimes". 30% of the students chose "often". And the rest 35% of the students chose "Very Frequently". this shows that there are not much difference between online synchronous learning and online asynchronous and both of them have their on way to help improve students' cognitive problem-solving. These findings are in line with the finding by Muzainin (2021), The results of the analysis showed that the subject's creativity was demonstrated through cognitive flexibility and cognitive fluency, indicated by repeated or cyclic cognitive processes before the participant discovered the solution to the problem. This means that both synchronous and asynchronous learning methods can support the development of college students' creativity during the covid-19 pandemic.

### **4. Interactions With Instructors**



Interactions with instructors show the behavioral engagement in which the learner communicates with the instructor of an online course. In the online learning environment, the level of engagement is higher when the learners sense a teaching presence that they can feel in the actual learning field with the lecturers. For online synchronous learning, 17.5% of the students chose "rarely". 20% of the students chose "sometimes". 35% of the students chose "often". And the rest 27.5% of the students chose "Very Frequently". Meanwhile, For online asynchronous learning, 60% of the students chose "rarely". 22.5% of the students chose "sometimes". 12.5% of the students chose "often". And the rest 5% of the students chose "Very Frequently". this shows that the communication between the students and lecturer in online synchronous learning were much more frequent compared to online asynchronous learning. These findings are in line with the finding by Nikmah (2020), that students in online synchronous learning, tend to be more communicative with their lecturer. Interactions with instructor are needed to explain materials, discuss, and motivate students. It is an active way to teach and learn

### **5. Community Support**

The community support factor is related to the psychological state of the learners, such as the bonds or the sense of community that is formed among learners that are enrolled in the same online courses. An emotional sense of belonging can be a major factor in the prevention of dropouts and help students to engage in classes. For online synchronous learning, 55% of the students chose "rarely". 22.5% of the students chose "sometimes". 10% of the students chose "often". And the rest 22.5% of the students chose "Very Frequently". Meanwhile, For online asynchronous learning, 15% of the students chose "rarely". 17.5% of the students chose "sometimes". 22.5% of the students chose "often". And the rest 45% of the students chose "Very Frequently". this shows that students feel more content with online asynchronous learning more than online synchronous learning. These findings are in line with the finding by Xi Lin and Li Gao

(2020), the result of their research indicate that students have a stronger sense of community towards interacting, discussing, and sharing ideas in asynchronous online courses. Findings additionally highlight the benefits of taking courses in these two distance learning formats.

## **6. Learning Management**

Learning management emphasizes behavioral engagement in which learners manage their own learning during active learning participation in online courses. This factor is related to active and self-directed learning activities for learners in an independent learning environment. The learning management factor is related to activities, such as planning and management of learning and creating an effective learning atmosphere. For online synchronous learning, 20% of the students chose "rarely". 30% of the students chose "sometimes". 17.5% of the students chose "often". And the rest 32.5% of the students chose "Very Frequently". Meanwhile, For online asynchronous learning, 70% of the students chose "rarely". 27.5% of the students chose "sometimes". 20% of the students chose "often". And the rest 17.5% of the students chose "Very Frequently". this shows that students can managed their learning schedule better when it revolve around online synchronous learning class. These findings are in line with the finding by Parkes (2013), According to Parkes (2013), engagement in online synchronous learning environment can appear as behavior characteristics, such as eliminating distractions in the environment during the online class, managing learning using the online system, and managing the learning schedule by taking a lecture plan when taking the online class.

## CHAPTER V

### CONCLUSION AND SUGGESTIONS

In this chapter the researcher provides the conclusion related to the study and also suggestion. The conclusion of the study drawn based on the results and the discussion on the gained to answer the research questions. The suggestions are given to the students, English teacher, and also the future researcher.

#### 5.1 Conclusion

This study focuses on the Fourth-semester students at the English education department at the Islamic University of Riau. It studies and analyzes online synchronous learning and online asynchronous learning as well as the obstacles that they face in class. Based on the data gathered from the result of the research and discussion based on the formulation of the problem, it can be concluded that both online synchronous learning and online asynchronous learning have their own advantages and disadvantages that are better suited in certain situations and conditions. For online synchronous learning, the main obstacle that they face is peer collaboration(57.5%) and psychological motivation(45%). Meanwhile, for online asynchronous learning the problem that students mainly face is learning management(70%) and interaction with instructors(60%). On this basis, lecturers need to find the best method and media for each of their subjects that are best suited for their students. students also need to better prepare themselves and be more active in the teaching and learning process in order to keep up with the lecturers' demands.

#### 5.2 Suggestions

Based on the findings of the study, The researcher would like to give suggestion as following:

### **1. For students**

The researcher suggests that students have to be more active in learning and seeking knowledge, especially when they are doing online learning. In online learning, it is imperative for the students to actively learn since there are plenty of time and resources available to them online. Students also need to learn to adapt to the advancement of technology in order to keep up with the development of online learning media.

### **2. For English teachers**

The researcher hopes that teachers can be more open-minded in choosing the proper method and learning media for their class. Since online synchronous and online asynchronous online both have their own strengths and weaknesses, it is up to the teachers to find the best combination to make the teaching and learning process as efficient as possible. Teachers also need to adapt to the advancement of technology in order to keep up with the development of online learning media.

### **3. For future researchers**

The researcher hopes that this research doesn't end here. There are a lots more aspect regarding online synchronous and online asynchronous learning that hasn't been explored and covered. Hopefully this research can be useful for future research especially on the matters regarding the media of online synchronous and online asynchronous learning.



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