TEACHING ENGLISH IN INDUSTRIAL REVOLUTION 4.0:
Challenges and Opportunities

THESIS

Submitted by

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FAKULTAS TARBIYAH DAN KEGURUAN
UNIVERSITAS ISLAM NEGERI AR-RANIRY
BANDA ACEH
2020 M / 1441 H

THESIS

Submitted to *Fakultas Tarbiyah dan Keguruan*
Universitas Islam Negeri Ar-Raniry Banda Aceh
in Partial Fulfillment of the Requirements for The Degree
Bachelor of Education in English Language Teaching

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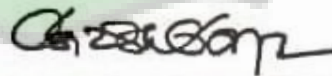
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Date: 12 / 6 / 2020   Date: 4 / 8 / 2020

It has been defended in *Sidang Munaqasyah*
in front of the board of the Examination for the working paper
and has been accepted in partial fulfillment of the requirements
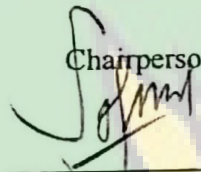for the Bachelor Degree of Education in English Language Teaching

On:

Wednesday, <u>19 Agustus 2020 M</u>
29 Dzulhijjah 1441 H

In Darussalam, Banda Aceh
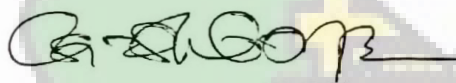
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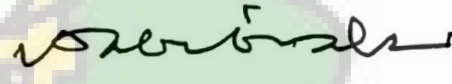
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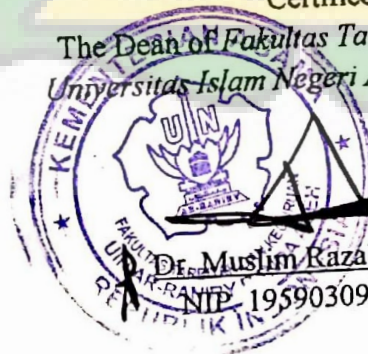Syarifah Dahliana, M.Ag., M.Ed., Ph.D

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adalah benar-benar karya saya, **kecuali semua kutipan dan referensi yang disebutkan sumbernya.** Apabila terdapat kesalahan dan kekeliruan didalamnya, maka akan sepenuhnya menjadi tanggung jawab saya. Demikian surat pernyataan ini saya buat dengan sesungguhnya.

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ACKNOWLEDGEMENTS

In the name of Allah, the beneficent and the merciful, all praises are to Allah. He is the Lord of the world and the King of the king. He is the creator of everything in this universe. He has given the researcher health and strength to finish this study. Peace and salutation to our prophet Muhammad Saw. He has brought the light to this world and guided his ummah to the right path.
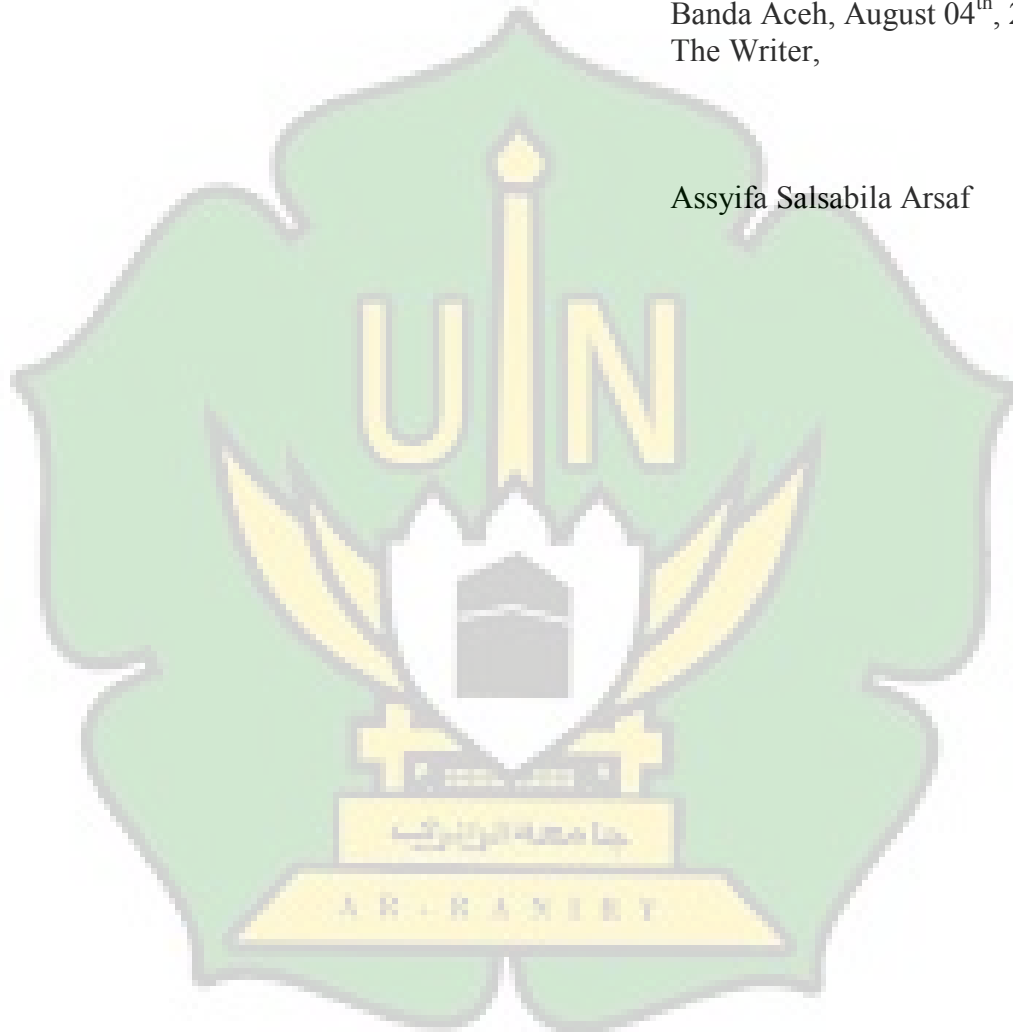
In completing this thesis, I faced many obstacles. Therefore, my wholehearted thanks go to Mr. Safrul Muluk, S. Ag., M. A., M. Ed., Ph. D and Ms. Syarifah Dahliana, M. Ag., M. Ed., Ph. D as the supervisors who have helped me in completing this thesis as good as possible. I also thank them for their guidance, advice, motivation, and many more in completing this thesis. I also express my gratitude to my beloved mother Husneta Ramly and father Bambang Saturday Yanto for their countless supports, love and prayer for me. I would not be able to finish this study without them.

My appreciation and thanks are also addressed to my beloved friends, who always lend me their back listening to my complaints, and give their best support when I cannot support myself anymore. For Jurmadi Abdullah, thank you for inspiring me to keep going and stay focused. I also dedicated my love and thank to my beloved brother, Arrahmat Riefky Al-Ghiffary for supporting me. I am forever thankful to all of my wonderful friends of Unit 01, TEN 2016, great family of MAN Model Banda Aceh, great family of Oemar Diyan Islamic Boarding School, EDSA

Ar-Raniry, and all of my friends that I cannot mention one by one who bring colors in my life, supporting me, and inspiring me. May Allah bless and reward your heaven.

Banda Aceh, August 04th, 2020
The Writer,

Assyifa Salsabila Arsaf

ABSTRACT

Education 4.0 is defined as the use of technology in the teaching and learning contexts. It is aimed at providing graduates with the capabilities and competencies required by the digital-driven industry. The purpose of this study is to find out the impacts of education 4.0 on English language teaching, the way to improve English teachers' professionalism in 4.0 industrial revolution and the strategies for the innovative classroom for education 4.0. The technique of data collection in this study is library research with descriptive qualitative design. The findings of this study indicate that 4.0 industrial revolution may have a positive and negative impact on English language teaching. The positive impacts include providing flexible time and place for learning, enhancing students' confidence and motivation, encouraging students' independence, improving students' creativity, establishing meaningful learning for students, preparing the graduate for future work and life, creating opportunities for the teacher to engage in technology in the learning process. The negative one involves creating difficulties for the unprepared teacher, reducing interaction between teachers and students, demanding high internet access, declining writing skills and lacking focus. Furthermore, to improve professionalism, a teacher should be aware of and adapt to the development, develop collaboration with students, improve the quality and the competency of teachers, join and participate in teachers' professional development.

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CHAPTER I

INTRODUCTION

This chapter describes the reasons for conducting the research and deals with several points such as the background of the study, research questions, objectives of the study, scope of the study, the significance of the study, terminologies, research design, technique of data collection and method of data analysis as elaborated in the following sections.

A. Background of the Study

Every Industrial Revolution has its benefits and challenges to education. For instance, Great Britain led the first industrial revolution with the contrivance of the commercial steam engine. In the second industrial revolution, the United States took the role with the telephone as the tool for communication. The third industrial revolution introduced the Internet as one of the most crucial components in education. The internet was the critical factor because it conceived as a public infrastructure technology rather a proprietary technology (Carr, 2003). All these industrial revolutions have resulted in economic growth, increased productivity, and advanced welfare in the countries that managed to gain most of its positive impact, as well as from high-quality products and services; and now we face industrial revolution 4.0. 4.0 industrial revolution is the current name that is given to the new trend of automation and manufacturing the technology. In term of the educational context, it

focuses on innovation and maximizes the use of information, the Internet, and technology. This new paradigm is currently promoted in many subjects, including English topics in term of English foreign language students.

Teaching and education are two things that are related to each other; in this era of the industrial revolution, most schools and institutes use technology in teaching and learning English. The new era assigns new challenges and duties on the modern teacher. The tradition of English teaching has been drastically changed with the technology, which provides many options to make education more exciting and more productive in terms of improvements. Technology is one of the most significant drivers of both social and linguistic change. Graddol (1997, p. 16) states "technology lies at the heart of the globalization process; affecting education work and culture". Education 4.0 influences are teaching and learning English by utilizing the Internet and technology as the source and media of learning (Puncreobutr, 2016). The teachers' assignment focuses on developing students' skills and abilities; learner-centered is the focus of education 4.0 to make the students become more active and improve their critical thinking toward the materials. The teachers may use platform that is suitable to the subjects in the teaching process, for instance, moodle, Quizlet, Bahasa, Canvas, Duolingo and others (Rahimi & Yadollahi, 2011), in this case, the teachers give any assignments through the platform to the students. They need to post their duties in those learning platforms.

As the use of English has increased in popularity, the need for teachers to instruct students in the language is also increasing. There are indeed teachers who use 'cutting edge' technology, but the majority of teachers still teach in the traditional manner (Madhavaiah, Nagaraju & Peter, 2013). None of these conventional manners is for the students. In fact, until this moment they are proving to be useful. However, there are many opportunities for students to gain confidence practice and extend themselves, especially for ESL students who learn the language for more than just fun. For them to keep pace with ELT and gain more confidence, they have to stride into the world of multimedia technology. The introduction of technology in English language classrooms in schools has been acclaimed to be a necessary course of action for the improvement of teaching methods. The introduction of technology in school is considered a necessity premised on pedagogical rationales (Rhema, 2010). Researchers have suggested that a crucial factor for successful technology integration into the English language classroom is the teacher (Rhema & Miliszewska, 2010).

Gips, DiMattia, and Gips (2004) indicated that the challenges of using technology, first, Internet for teaching and learning English is that they will increase educational costs and harm the equity of education; low budget schools and low-income students usually cannot afford a computer. Thus it will cause unfair educational conditions for those poor schools and students. In other words, expensive hardware and software also become significant obligations for schools and parents. Second, both teachers and learners must have basic technical knowledge before they

apply computer technology to assist second language teaching and learning. No students can utilize a computer if he or she lack of training in the uses of computer technology. Unfortunately, most teachers today do not have sufficient technological training to guide their students exploring computer and assisting language learning programs. Therefore, the benefits of computer technology for those students who are not familiar with a network are inexistent (Roblyer, 2003).

In Acehnese context, generally, most Acehnese does not know what education 4.0 is, they think that education 4.0 is the new trend in education. Many of them do not understand the meaning of education 4.0; the Aceh's government has to do specialized training for teachers related to education 4.0 to improve the quality of teaching and human resources.

To enrich the insight and knowledge about teaching English in 4.0 industry revolution and explore challenges of teachers in teaching English, the researcher is interested in conducting further research about how to teach English in industrial revolution 4.0.

This research focuses on finding out and investigating the challenges and opportunities of teaching English in 4.0 industrial revolution and the strategies for the innovative classroom, whether it can help the teachers to improve their resources and knowledge in English language learning.

B. Research Questions

From the statement mentioned previously, the following research questions need to be defined in this study:

    a. What are the impacts of education 4.0 on English language teaching?

    b. What can English teachers do to improve their professionalism in industrial revolution 4.0?

C. Research Aims

The objectives of this study are:

    a. To discover the impacts of education 4.0 on English language teaching.

    b. To find out the possible ways to improve English teachers' professionalism in 4.0 industrial revolution.

D. Scope of the Study

This research focuses on finding out and investigating the challenges and opportunities of English teachers in 4.0 industrial revolution and the strategies for the innovative classroom, whether it can help the teachers to improve their resources and knowledge in English language learning.

E. Significance of the Study

Referring to the aims of the study, the result of this study is expected to give any information and solution for the teachers in facing 4.0 industrial revolution. This study may also help them to know what should they do to meet the challenges and

opportunities of 4.0 industrial revolution, what are the impacts of education 4.0 on English language teaching and how to improve their professionalism.

For the students, this study provides information about learning English in industrial revolution 4.0, so it may encourage them to improve their critical thinking and solve complex problems, develop different forms of communication, improve motivation, productivity, soft skills and hard skills for their future success.

F. Terminologies

In order to avoid misunderstanding, I have defined the following operational definitions of this research as follow:

1. *4.0 Industrial Revolution*

Industrial revolution 4.0 is the current name that is given to the innovation of technologies and trends such as the Internet of Things (IoT), robotics and others. Industry 4.0 is the term used to refer to the developmental process in the management of manufacturing and chain production (Schwab, K. 2016). On the other perspective, 4.0 industrial revolution is the modern and more sophisticated machines and tools with advanced software, and networked sensors can use to plan, predict, adjust and control the societal outcome and business models to create another phase of value chain organization. It can manage throughout the whole of the product (Mrugalska & Magdalena, 2017). Thus, Industry 4.0 is an advantage to stay competitive in any industry, to create a more dynamic flow of production, optimization of the value chain has to be autonomously controlled.

In this study, 4.0 industrial revolution means a new phase in the industrial revolution that focuses heavily on technology, interconnectivity, automation, machine and learning.

2. Teaching English

Teaching English is the activity, process of attending to people's needs, experiences and feelings, whether with children, adolescents, or adults, and whether as a first, second, foreign, or additional language (Brown, 2001). The teaching ability is a must for every teacher, and one of the knowledge is to face students who have different characters, capabilities and desires. The teacher should be able to accommodate all the wishes of their students.

In this research, the meaning of teaching English is the process whereby a teacher from different background facilitates language practice for the learners.

G. Method

1. Research Design

The approach used to conduct this research was descriptive qualitative design because the researcher attempted to discover and find out teachers' challenges and opportunities in teaching English in the industrial revolution 4.0. Mohajan (2018) defines that "qualitative research is a form of social action that stresses the way people interpret and make sense of their experiences to understand the social reality of individuals" (p.2). According to Arikunto (2006, p. 35), descriptive research is research to explain phenomena. Denzin and Lincoln (2000) claim that qualitative

research involves an interpretive and naturalistic approach: "This means that qualitative researchers study things in their natural settings, attempting to make sense of or to interpret phenomena in terms of the meanings people bring to them" (p. 3).

The researcher chose qualitative research because this method can explore and discover the data from books, journals, articles and thesis. Qualitative research is useful for exploring and understanding complicated matters, for explaining beliefs and behaviour, as well as identifying the norms of a society. Thus, it is the most suitable approach for this research.

2. *The Technique of Data Collection*

The technique of data collection in this study used library research. The technique of data collection is used to answer a variety of questions. According to Zeid (2004), library research is research that uses library sources to get the data. It uses library sources to collect and analyze the data. The researcher draws and integrates her ideas to conduct excellent and clear conclusion. In this research, the researcher uses some sources such as books, journals and articles as references.

According to George (2008), library research is not a mystery or a lucky dodge. Still, an investigation you control from start to finish, even though you cannot usually tell what sources you will discover. Library research is a form of structured inquiry with specific tools, rules and techniques. In other words, the data of library research is not limited by time and space. According to Elmer (2018), the benefits of using library research approach are researcher natural to find a variety of materials for

research references and all topics have been categorized in library research methods. Thus, the researcher can reach the data easily without any limited space and time.

3. *The Technique of Data Analysis*

Data analysis is a systematic process to help the researcher understand the data. Barbara (2004) states that study is the process of understanding the data by reducing the amount of data collected. The data analysis should be done as soon as possible after the data have been collected even though the researcher is still in the field or no longer in that place.

In this research, the data of library research were analyzed by using the coding technique. Coding is an almost universal process in qualitative research; it is a fundamental aspect of the analytical process and how researchers break down their data to make something new. "Coding is the process of analyzing qualitative text data by taking them apart to see what they yield before putting the data back together in a meaningful way" (Creswell, 2015, p. 156).

There are three phases of coding carried out to analyze the data of the library research. They are open coding, axial coding, and selective coding. Open coding is the process of breaking down the data into separate units of meaning (Goulding, 1999, as cited in Moghaddam, 2006). The primary purpose of open coding is to conceptualize and label the data, and free coding starts from the process of categorizing individual phenomena. Separately categorized the concepts are clustered around a related theme to structure more abstract categories (Brown et al., 2003 as

cited in Moghaddam, 2006). The researcher decided to employ open coding to analyze the data because it helps the researcher to build theories in an inductive process. Therefore, simplifying using open coding is the first phase to extract the results of the study so that they are easier to be understood and interpreted. The second and third phases in this study involve axial and selective coding. Axial coding categories are related to their subcategories to form more precise and complete explanations; and particular coding categories are organized around a central explanatory concept until an analytical process allows the theory to emerge (Strauss & Corbin, 1998, as cited in Blair, 2015).

The first step to do in analyzing the data is reading and identifying the challenges and opportunities faced by the teacher in 4.0 industry. The writer analyzes the data based on the goals of the study; they are to discover the impacts of education 4.0 on English language teaching and to find out the possible ways to improve English teachers' professionalism in 4.0 industrial revolution. Second, after analyzing journals, books and article, the researcher transcripts the data. Third, the researcher reduces the data to examine which data is essential and useful for this research, and later, the data are classified into several groups. Next, the researcher analyzes the information that is related to the purposes of this study. After the data have been analyzed, the researcher will make a judgement based on the data from the books, journals and articles as evidence.

CHAPTER II

LITERATURE REVIEW

In this chapter, the researcher provides a literature review related to this research. This review covers several main concepts such as 4.0 industrial revolution in education, teaching English and previous study.

A. 4.0 Industrial Revolution and Education

1. *Definition of 4.0 Industrial Revolution*

Industry 4.0 is related to what is called the "smart factory" (Dutton, 2014). In a smart factory, a virtual copy of the physical world and decentralized decision making can be developed (Buhr, 2015). Also, bodily systems can cooperate and communicate with each other and with humans in real-time, all enabled by the internet of things (IoT) and related services. The debate about industry 4.0 and its global impact is proliferating due to intense discussion about the internet of things, the new technology and smart knowledge and systems (Friess & Ibanez, 2014; Vermesan et al., 2014).

Sommer (2015) notes that the important thing in industry 4.0 is to increase the awareness of 4.0 sector and its dimensions to increase the competitiveness of the companies. Klingebiel (2017) offer that the strategy required for Industry 4.0 to solve the capacity problem of data generated by smart systems, and those countries need to be proactive for technological improvements.

In short, industry 4.0 is the current trend in shaping the future of many industries by creating new business models. Therefore, it is crucial to investigate its dimensions to realize efficiencies in the business environment.

2. *Challenges and Opportunities of 4.0 Industrial Revolution*

Among the biggest challenges of the 4.0 industrial revolution is that this era will bring significant changes to the structure, model and type of work needed. As a result, many old jobs are threatened with loss. Futurist such as Gerd Leonhard estimates that globally the era of digitalization in the IR 4.0 era will eliminate around 1 - 1.5 billion jobs throughout 2015-2025 as automatic machines will replace the human positions. The United States Department of Labor estimates that in the future, 65% of elementary school students in the world will work on jobs that have never existed today (Naim, 2017).

In the context of Indonesia, this threat has also been voiced by many parties, including Rhenald Kasali, an expert in human resource development teaching at Indonesia University. He had warned people that many jobs would be lost when the muscles were replaced by robots and machines in this era of digitalization. But, at the same time, he also mentioned the extraordinary thing of digitalization (Kasali, 2017); the change can make us more human, for example, transporters who have been replaced by cranes and forklifts. Not only at the port, even in supermarket young people is now turning from the pelvis to guards in the control room, the translator and librarian are also predicted to follow the lost and replaced machines. Even the lecturer

and teacher are predicted to disappear because the campus will turn into a kind of event organizer (EO) that organizes lectures from world-class scientists. Cashiers at supermarkets, taxi drivers, newspaper delivery, insurance agents, and a large number of accountants are also predicted to decrease. Therefore, we certainly need to rethink the work that we are engaged in today.

Apart from bringing challenges, this era of digitalization also brings many opportunities. The World Economic Forum, for example, estimates that digitalization of manufacturing in the 4.0 industrial revolution era has the potential to provide a net increase in employment to 2.1 million new jobs by 2025 (Naim, 2017). Other opportunities are related to the latest technologies integrated into the 4.0 systems. The fourth industrial revolution is characterized by the merger of digitalization and automation to make the machines intelligent, interactive, and easy to use, these new technologies will have a big impact on working patterns, there will be new types of robots that can interact with humans (Petrillo, Felice, Cioffi & Zomparelli, 2017).

3. *The Advantages of 4.0 Industrial Revolution*

The technology is not only replacing physical jobs but also replacing dangerous situations. The use of smart robots, for example, is now used by police to enter homes that are controlled by terrorists and put out fires. In another place, we see the labourers on duty at the toll gate have begun to be replaced with machines. According to Kasali (2017), this is a positive thing, because working at toll booths is getting more dangerous, both for health (vehicle carbon fumes), security and comfort

(not equipped with toilets), it is not to mention technology is also replacing distance, so that crowded and jammed shopping centres are suddenly lonely because consumers choose to shop from their hands and the goods come alone. In short, Rhenald Kasali reminds that the rapid changes due to the digitization of this industry have caused many new jobs in the next 20 years and protect the human.

4. *4.0 Industrial Revolution in Education*

    a. The Impact of 4.0 Industrial Revolution in Education

    The impact of 4.0 industrial revolution can change the landscape of the education system. These shifts are enabled by smart technologies, including artificial intelligence, big data, augmented reality, the internet of things, and automation (Marr, 2019). These technologies are disrupting every industry across the world at unprecedented speed. Another impact of 4.0 industrial revolution in education is education getting personal (Duke, 2019), for example when the teacher measures the student's performance and behaviour, they can finally offer a personalized learning experience for them. If an individual student is facing learning disabilities, they can find a different approach in their teaching methods.

    b. The Challenges of 4.0 Industrial Revolution in Education

    4.0 industrial revolution will dramatically change the way we relate to one another, live, work, and educate the children. In term of education, (Colin, 2017) are worried about teachers. He said that their readiness in responding to 4.0 industrial revolution and the preparedness of each university in facing the era of

the industrial revolution 4.0 had not been well fulfilled. He emphasized that investment in technology must be available, and human resources must be developed as well as possible so that the "teacher" in the world of education is not replaced by technology and machine.

The challenge is not only the threat of the existence of teacher replaceable teacher jobs but also in terms of how educators face new genes which have their characteristics (Naim, 2017). Todays' teachers, for example, will face children who are very close to gadgets since they were from babies. It is a challenge for teachers to anticipate this condition in their learning process in the classroom, therefore the teacher must continue to think about how they can utilize the closeness of students with technology, such as gadgets in the learning process in the classroom. Otherwise, the classes will be boring. Students will be more interested in playing with their gadgets (if they are allowed to bring into class), rather than listening to teachers' lectures that may be monotone in the classroom. Students can assume that they do not need teachers because they can find out the various contents of the lessons they need by themselves. They can even know the contents of the experience long before being delivered in class.

c. The Characteristics of Education 4.0

1) Technology in Teaching and Learning Process

According to Dunwil (2016), education 4.0 is related to the use of technology in teaching and learning process; This is because technology enables the

human-machine interface to look universal that contributes to a quick revolution in innovation, this is to prepare graduates for future life and work. Thus, education 4.0 is much needed. Learning 4.0 has been designed as to the response to the needs of industrial revolution 4.0 where teaching methods have slowly now transformed into a more technology-based teaching. Fisk (2017) explains that the new vision of learning is aimed highly to improve the digital technologies competencies across all levels to enhance the use of technology in teaching and active learning.

2) Provide Many Benefits

Education 4.0 is not only beneficial to students but also the teachers at any level of education. Jo & Lim (2015) stated that practical supports are needed and essential in the smart classroom to improve the teaching and to learn through teachers still engage the chalk and board method in education. Anealka & Hussin (2018) emphasized that every educator is in need to re-learn and prepare themselves with the digital tools to meet the demand of the future learner.

3) Provide Digital Tools for Teachers

There are many digital tools which are available online for teachers to access and explore. Technology and Mobile Learning (2016) suggested teachers equip themselves with these nine major digitals such as record and edit audio clips, create annotated, interactive and engaging video content, use social

networking websites, use blogs and wikis to create participatory spaces for students, use social bookmarking websites and share resources in class, create engaging presentations, create digital portfolio's and create non-traditional quizzes. Learning these digital tools shows how digital technology can be combined and integrated into teaching and learning. Teachers get a chance to enhance and acquire the skills listed in the top10 abilities in 2020.

4) Improving Students Creativity

Students have a choice in determining how they want to learn. Although the learning outcomes of a course are preset by the institutions in charge of the curriculum, students are still free to choose the learning tools or techniques that they prefer, among the options that lecturers can adapt to enable students to be creative in their learning are blended learning, flipped classroom and BYOD (Bring Your Own Device) approach (Fisk, 2017).

5) Project-Based Learning

Students will be exposed to more project-based learning. Students are required to apply their knowledge and skills in completing a couple of short-term projects. By involving in the projects, they are practising their organizational, collaborative and time management skills which are useful in their future academic careers. According to Sariani, Yaningsih and Khairat (2020), through the project-based learning, mobile application technology can facilitate the students in the language learning process effectively and

efficiently, and empower themselves to get maximum results, which is ultimately improve the output of educational institutions in the future.

6) Students More Independent

Fisk (2017) states, students will become more independent in their learning, thus forcing teachers to assume a new role as facilitators who will guide the students through their learning process.

7) Conducive Learning Environment

According to Soffel (2016), the strategies for conducting a conducive learning environment is essential, and it can help students to develop their collaborative, communicative and problem-solving skills. Having incorporated policies, the students are hoped to have better character qualities such as having social and cultural awareness, leadership skills, be more adaptive, persistence and initiative. Besides character qualities, students are also hoped to acquire competencies related to problem-solving or critical thinking skills, creativity, communication, and collaboration.

B. Teaching English in 4.0 era

1. The Definition of Teaching English

According to Tyson (2015), teaching is a process of interaction, and the teacher does something to a student; the students do something in return. From this definition, I reflected that teaching is a way and an active-bilateral process between students and teachers. According to Nasution (2009), education is an activity to

organize or regulate the learning environment. From this definition, education is an activity to connect the children with an organized learning atmosphere.

Johnson (2007) stated that the teaching process should involve students in the search for meaning and should enable students to understand the meaning of the lessons they are learning. From this definition, teaching is the process that involves students in learning activities so that students know what they receive in the experience and understand the material presented by the teacher to create the purpose of the learning.

Teaching English becomes a professional and academic field from a half-century ago. Many researchers for teacher education and teacher training have been conducted to raise the English as well as the foreign language trainers' knowledge and capabilities in carrying out effective lessons in classroom. During second millennium of speedily globalized world, teaching English as a common communication tool has become even more significant than half century ago (Grace, 2010).

English Language Teaching (ELT) has undergone fundamental changes in the past few decades. These changes include the different of English language teaching methods such as Audio-lingual method, silent way and scientific approach (Larsen Freeman, 2012). The transitions undoubtedly affected the conceptualization of language teachers in general and teacher education programs in specific. Teachers are assumed to have an effective role in managing the most successful learning process. As a result, it shows the need of training and move towards educating teachers who

are fully qualified and not just label them as competent teachers only due to their capability of speaking the language. Consistent with the discussion of professionalization, Burns and Richards (2009) consider English language teaching as a career requiring a certain types of knowledge that can be acquired through experience and education. Accordingly, the encouragement for defining qualified teachers has tended to direct the attention towards teachers' subject matter preparation. Even there has been claimed that students' achievements are highly linked to the amount of teachers' knowledge as well as the quality of learning opportunities provided by teachers (Hattie, 2009).

2. ***The Challenges of Teaching English***

a. Lack of English exposure

Teaching English as a foreign language is a challenging duty in places where English has inadequate exposure. Lack of English exposure also serves less opportunity for students to use English. Khan (2011) argues that the lack of English purposes motivates students to practice and understand English due to students' insufficient background knowledge of English.

b. Interpersonal skill

Another big part of teaching English is the need for strong interpersonal skills (Shwab (2016). An English teacher will meet a lot of different people with a whole variety of backgrounds and have to bond with them quickly, as well as to understand their motivations and concerns.

c. Lack of interest and fear

The students did not take an interest in learning the English language or feel fear and shame in conversation with the other students and also interaction with the teacher in learning the English language.

d. Using other languages

Another major problem that the teachers faced in teaching English is the students used their native language in the classroom. They rarely used the English language for communicating in the classroom (Widdowson, 2015). The most challenging task for the students is to think and to make sentences of the English language and speak to their friends. So, they used their native language for communicating with others to make it easy.

e. Limited Time

Another challenge in teaching English is limited time. Time is the most important thing in learning English. It takes time for the teachers to observe their students and guide them at their level. The learners only study the English language 60 minutes in a day. Further, these learners are not given enough time and opportunities to practice the English language in the classroom because of switching subjects from one to another, from one word to the other. Teachers of the other subjects keep changing the language of instruction from English to another language; for instance, Indonesian language teachers will use the Indonesian language during the learning process.

f. A Large Number of Students in the Classroom

A large number of students in the classroom produce a lot of disturbance and stress for the teachers because teaching a large number of students the teachers have to make more effort. Hardworking, the example problems caused by a large number of students are the learning resources are not available for all the students, challenging to manage the students and disturbed the teacher by making noises. These are some problems that arise in a crowded class.

g. Wrong Syllabus

Syllabus plays a significant role in teaching an English lesson and also in other subjects. It is a kind of content that the teachers follow what to explain to the students. Mostly the teachers faced this problem in teaching English. Syllabus helped the teachers to prepare the crucial factors of the course and organized the overall direction to show the students step by step, and the wrong program will make negative impressions on the students. By this, the students cannot learn and speak the English language (Diwan, 2017).

h. Student Depends on a Teacher

Another noticeable problem faced by the teachers is the students entirely depend on the teachers (Soffel, 2016). They did not try to learn and speak themselves. Because of this problem, the students did not learn the technical terms and conditions of using different kinds of tenses and words in English.

These are the most common and significant problems faced by English teachers in teaching English to the students in which the English language is not their native language.

3. **English Classroom Practice in Industrial Revolution 4.0**

Classroom practice is a process that involves multiple agents and their interactions within the classroom as a system. The process can be manifested in diverse formats and structures, and its effectiveness can be influenced by numerous factors, both internal and external to the classroom. When classroom practice is part of the learning cycle, teachers are provided more time and space to try out new ideas. The design ensures that the implementation of new strategies and content reaches can improve student's motivation in learning English (Li Y., Oliveira H, 2015).

There are several approaches that teachers should do in the era of 4.0 industrial revolutions:

a. Contextual Learning

Purnomo (2017) states, learning material, must be by the daily lives of students. The teacher develops learning methods that enable students to connect with their real world. Learning should be directed at formulating existing problems rather than just answering questions. The teacher helps students to find values, meaning and confidence in what they are learning and may apply in their daily lives. The teacher conducts students' performance valuation that is

associated with the real world. Problems based learning and contextual learning are among the approaches that can be used in this case.

b. Student-Centred

The development of learning in class should use a student-centred learning approach, while teachers as a learning facilitator. Students are placed as the learning subjects who actively develop their interests and potential, other learning models that teachers can use, such as project-based learning, problem-based learning or scientific approach. The classroom observations and views of teachers and students revealed that is student-centred and interactive technique to teaching which focuses on group work, cooperative and collaborative practice, flexible learning, and activity-based teaching to achieve learning objectives (Cheong, 2010). By using these strategies, teachers provide the learners with a variety of learning opportunities like service-based learning, problem-based learning and team-based learning.

c. Collaborative Learning

Collaborative learning is an educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, or create a product. In a collaborative learning environment, the learners are challenged both socially and emotionally as they listen to different perspectives, and are required to articulate and defend their ideas. In so doing, the learners begin to create their unique conceptual frameworks and not rely solely on an

expert's or a text's structure. In a collaborative learning setting, learners have the opportunity to converse with peers, present and defend ideas, exchange diverse beliefs, question other conceptual frameworks, and are actively engaged (Srinivas, 2011). Students must be able to collaborate with others. Collaborate with people who differ in their cultural setting and values. In exploring information and building meaning, students need to be encouraged to be able to collaborate with friends in their classrooms. It is necessary to improve their critical thinking, soft skills and hard skills, in doing the projects, students need to be taught how to appreciate the strengths and talents of each person and how to take roles and adapt themselves appropriately.

d. Community Integrated Learning

The teachers have to prepare students to be responsible in society. Therefore, learning should be able to facilitate students to be involved in their social environment. For example, holding community service activities, where students can learn to take roles and perform specific actions in a social situation and can do specialist works (Purnomo, 2017).

e. Technology-Based Learning

As the characteristic of 4.0 industry, learning that is synonymous with the internet of things, the internet of people, connectivity, and digitalization, it is highly necessary for teachers to integrate their learning and teaching activities with the up to date information technology developments. For example, the

teachers can combine offline learning mode with online such as blended learning or hybrid learning. They may use several online learning application such as Google Classroom, Ruang Guru, Quipper, Zenius, Duolingo, Canvas, Moodle, Bahaso and other similar applications to enhance students' learning (Purnomo, 2017).

Besides English classroom practice in industrial revolution 4.0, another trends in education 4.0 that faced by teacher in teaching and learning process is classroom management, classroom management is intended to provide students with more opportunities to learn all of the things that a teacher does to organize students, space, time, and materials so that students' learning can take place. Students should be able to carry out their maximum potential, which allows students to develop appropriate behaviour patterns. Teachers must deal with unexpected events and have the ability to control student behaviour, using effective classroom management strategies. Effective classroom management and positive classroom climate construction are essential goals for all teachers (Wiseman & Hunt, 2008).

4. *Previous Research*

There are some previous studies which are similar or inline related to the teaching English in industrial revolution 4.0: challenges and opportunities. Here, the researcher summarizes some previous studies that can be used as guidelines for the

researcher in conducting the new one and explaining the way this study is different from the previous one.

The first study was "Being a Professional Teacher in the Era of Industrial Revolution 4.0: opportunities, challenges and strategies for innovative classroom practices" by Afrianto, the Faculty of Teachers Training and Education (FKIP), Universitas Riau. This study focuses on how professional teachers in Indonesia can maintain their professionalism in a rapidly developing world due to the developments caused by industrial revolution 4.0. The purpose of this study is to know how teachers' strategies in conducting innovative classroom and developing curriculum for the students. The findings show that industrial revolution 4.0 has brought many significant changes in human life. It has fundamentally changed the way people move and has a considerable influence on many aspects of human life, including in economy, security systems, politics, and education. To be professional teachers must be able to apply technology in the teaching and learning process, integrating classroom activities with some online platforms through blended or hybrid learning.

The second study is "Educational Challenges to the 4.0 Industrial Revolution: Experience from Indonesia" by Imam Ghozali from Sarjanawiyata Tamansiswa university. This study focuses on the challenges of education in facing 4.0 industrial revolution. The findings show that these technology breakthroughs are designed to make a better world through maximizing human being and adding quality to quantity to build just world.

The third study is "Industrial Revolution 4.0 and Education" by Aida Aryani Shahroom and Norhayati Hussin Faculty of Information Management, University of Teknologi MARA, UiTM Selangor, Malaysia. The study was conducted to discuss what happened to the education system in the era of industrial revolution 4.0. The purpose of this study is to find out the best strategy to deal with industry 4.0, especially in the education system. The findings are, to deal with industry 4.0 transformation challenges, an organization need to have a successful strategy. The developing of technologies, such as big data will replace most of the processes. The next generation is more attracted to the use of smartphones and apps. New technologies transform our lives by inventing new, undreamed-of things and making them in further.

The next is a study by Norizan Abdul Razak, Hussien Alakrash and Yasmin Sahboun in 2018 entitled "English Language Teachers' Readiness for the Application Technology towards Fourth Industrial Revolution Demands". This article discussed how to use current technology in teaching and learning the English language in 4.0. The methodology in this paper is qualitative research design as the qualitative design considers as a means for exploring and understanding the meaning individuals and groups ascribe to social or human problems. The study was designed to measure the English teachers' readiness for using technology in teaching English at international Arabic schools in Malaysia. The final finding of the study showed that the teachers are not ready to use the technology in teaching English.

The last is the study under the title "The Fourth Industrial Revolution (Industry 4.0): A Social Innovation Perspective" by Rabeh Morrar, Husam Arman, and Saeed Mousa. This study focuses on how was the industrial revolution in social perspective. This study used an exploratory approach to discuss how to resolve industrial revolution 4.0 in the context of social and environmental perspectives. The final finding shows that the exploratory work aimed to develop an understanding of the social aspects of the fourth industrial revolution by demonstrating how the interaction between technological innovation and social innovation can solve current societal and socioeconomic problems with an emphasis on sustainability. One of the essential criticisms for the previous three industrial revolutions and their associated policies is the failure to solve the most pressing issues that continue to face modern societies.

The things that make this study is different with previous researches are in this study the researcher provides any information and solution about the positive and negative impact of education 4.0 on English language teaching and the possible ways to improve teachers professionalism. The data for this study are from various books, journals, articles and online platforms so that the future researcher can find assorted information and get a more reliable result.

CHAPTER III

THE IMPACTS OF EDUCATION 4.0 ON ENGLISH LANGUAGE TEACHING

This chapter presents the impacts of education 4.0 on English language teaching. The discussions are aimed to answer research question one. The findings are displayed based on the data obtained from library research, explained descriptively and also followed by a discussion to provide and support the explanation coherently.

A. Positive Impact

The implementation of education 4.0 is necessary as it is a more practical based approach in the teaching and learning contexts. Education 4.0 offers the view of teaching and learning innovation and uses information and technology in its processes (Gulicheva, 2017 ; Anggraeni, 2018). Education 4.0 has positive impacts, these are: providing flexible time and place for learning, enhancing students' confidence and motivation, encouraging students' independence, improving students' creativity, establishing meaningful learning for students, preparing graduate for future work and life and creating opportunities for teachers to engage in technology in learning process.

1. *Provide Flexible Time and Place for Learning*

Education 4.0 emphasizes the use of technology in teaching and learning; thus, the implementation of e-learning cannot be avoided. E-Learning tools offer great opportunities for remote, self-paced learning. Flipped classroom approach also plays a huge role as it allows interactive learning to be done in class, while the theoretical parts to be learned outside the class time. With flexible learning, students gain access and flexibility with regard to at least one of the following dimensions: time, place, pace, learning style, content, assessment or learning path (Muller, Stahl & Alder, 2018). Zurich University of Applied Sciences (ZHAW) has launched a new flexible learning study format called FLEX, a blended learning design allowing students to be more flexible as to when and where they study. As learning can take place anytime and anywhere (Fisk, 2017), the use of technology will support students to learn without limitation in time and place.

2. *Enhance Students' Confidence and Motivation*

In education 4.0, students have a choice in determining how and what they want to learn; it is essential to improve their confidence and motivation. Motivation is an internal state that arouses students to action, directs them to certain behaviors and assists them in maintaining that arousal and response about practices essential and appropriate to the learning environment (Wiseman & Hunt, 2014). Although the learning outcomes of a course are preset by the institutions in charge of the curriculum, students are still free to choose the learning tools or techniques that they prefer. Among the options that lecturers can adapt to enable students to be creative in

their learning is blended learning, flipped classroom and BYOD (Bring Your Own Device) approach. According to Fisk (2017), education 4.0 benefits students by creating an opportunity to experience a more practical based learning instead of theoretical base knowledge. Learners will need to familiarize and get themselves adapt to project-based learning. They will need to enhance and improve their skills and absorb how to apply and mould them, it is necessary to improve their confidence.

3. *Encourage Students' Independency*

In education 4.0, students' opinion will be considered in designing and updating the curriculum. Their inputs help the curriculum designers maintain curriculum contemporariness, up to date and usefulness and lastly, students will become more independent in their learning, thus forcing teachers to assume a new role as facilitators who will guide the students through their learning process (Fisk, 2017).

In addition, as the internet is being used as a source for teaching material, the students will play a more active role, which will help them retain more information. Also, follow-up discussions will contain more detail where students will become more independent (Tutkun, 2011).

4. *Improve Students' Creativity*

Education 4.0 related to technology; Dunwill (2016) says that the advancement of technologies keeps on changing and transforming the teaching method and the setting of the learning process. There will be more changes in the future. Some of the

frequent changes that have been embraced by institutions include lecturers post students' grades and assignment online, and students use collaborative software or application to complete group tasks, students complete their homework online and upload them in an online class portal. These situations require students to be creative.

Technology causes students to be more engaged; thus, students often retain more information. Technology provides meaningful learning experiences for students; it also offers hands-on learning opportunities that can be integrated into all school curricular areas, including English, Mathematics, Reading, Science, and Social studies as well as other academic subjects (Hussin, 2018). It gives students opportunities to collaborate with their peers resulting in learning from each other (Kurt, 2010).

5. *Establish Meaningful Learning for Students*

Technology can be a particularly useful tool for English language learners and can enhance the participation of disabilities students, and technology can be used as a tool for establishing meaningful projects to engage students in critical thinking and problem solving. It can be used to restructure and redesign the classroom to produce an environment that promotes the development of higher-order thinking skills (Kurt, 2010).

Technology also increases student collaboration. Collaboration is a highly effective tool for learning. Students cooperatively works together to either create

projects or they can learn from each other by reading the work of their peers (Keser, Huseyin and Ozdamli, 2012).

6. Prepare Graduate for Future Work and Life

According to Dunwill (2016), education 4.0 is defined as the use of technology in teaching and learning contexts. This is because technology enables the human-machine interface to look universal that contributes to a quick revolution in innovation. This is to prepare graduates for future life and work. Thus, education 4.0 is much needed. The implementation of education 4.0 is necessary as it is a more practical based approach in the teaching and learning contexts. Education 4.0 offers the view of teaching and learning innovation and uses information and technology in its processes (Gulicheva, 2017). They are using technology to interact and exchange ideas, research independently, adapt to new situations, and take ownership over their own learning (Miller, 2011), these things are important for students future work and life.

7. Create Opportunities for Teachers to Engage in Technology in Learning Process

Education 4.0 creates an opportunity for educators to engage in new technology tools to make them relevant in the industry (Hussin, 2018). Teachers play a crucial role in connecting the students and real work life. This requires designing tasks or activities that engage learners to become involved in the thinking and learning process. For instance, using the flipped classroom technique will enable learners to

complete a specific task beyond the classrooms via technology and in the meantime assists teachers in providing more engaging learning experiences that promote a more independent learning environment. Indeed, education 4.0 offers an opportunity for educators to engage in new teaching methods (Fisk, 2017).

The technology has always been a supportive part in the teaching and learning environment. However, Johnson (2016) argues that choosing the best technological tools can be the utmost challenge for the teachers. Education 4.0 has created an opportunity and a massive platform for all educators to engage in new teaching styles.

Malik (2018) has emphasizes his thoughts that an educator should be dynamic and able to become accustomed to various changes to diversifies the teaching and learning methods. Keeping in mind, developing students' knowledge and skills related to technology in the education provides an important grounding for later in life, therefore every educator needs to have a proper knowledge on the application of the tools to educate the learners.

B. Negative Impact

Education 4.0 has been designed as a response to the needs of industrial revolution 4.0 where teaching methods have slowly now transformed into a more technology-based teaching. Fisk (2017) explains that the new vision of learning is aimed highly to improve the digital technologies competences across all levels to enhance the use of technology in teaching and active learning. Although technology-based teaching has many benefits for both students and teachers, it also creates some

negative impacts, these are: create difficulties for unprepared teacher, reduce interaction between teachers and students, demand high internet access, decline writing skills and lack of focus.

1. *Create Difficulties for Unprepared Teacher*

According to a research conducted by Abraham & Reginald (2016), a high level of resistance to change occurs among the educators towards the use of technologies in the classroom. The teachers will resist changing or will not step out from their comfort zone that they have been putting into practice for many years. Many educators feel unprepared to use technology to support student learning; most of them are comfortable teaching the traditional ways.

Although, teachers are always expected to stay relevant to current teaching technologies (Burroughs, 2017), some teachers still apply the traditional teaching method till now (Azmi & Nurzatulshima, 2017). The conventional teaching approach has limited the involvement of a learner; thus, the learning process also becomes limited to a learner. Yunos (2015) reported that when a limited strategy applied in the teaching and learning contexts, learners seemed to show less interest in the learning process. On the other hand, some teachers feel they are not the experts in dealing with technology and needed adequate time to learn since it takes up an amount of time to learn new tools and software (Abraham & Reginald, 2016).

2. *Reduce Interaction Between Teachers and Students*

Our society is rapidly evolving in technology with no doubts; every information is available at our convenient at anywhere (Hussin, 2018). With the incredible advancements of technology, we all get connected all across the globe in a second. In reality, technology is in many situations, permanently removing us more and more from each other. Teachers are so busy delivering the education to their students using the online educational tools that are accessible, and this has a limited face to face communication between the teachers and students whereby the students hardly share their problems openly to their teachers. In a way, technology advancements have limited the engagement or involvement of an educator towards its learner.

The technology makes teachers and learners get disconnected from real world. Kushlef, Proulx & Dunn (2017) stated that individual nowadays depend too much on technology instead on other people for any sorts of information. McCrindle and Wolfinger (2010) found that teachers also take technology for granted at the same time. Sutton (2013) claimed that technologies further disconnect people from practical world and push an individual towards a cybernetic world.

3. *Demand High Internet Access*

Kozinski (2017) said that knowledge has no age and no limit. Many students have an urge to continue learning regularly, but sometimes it becomes challenging for them to attain all the classes usually. These difficulties can occur due to many

reasons; it can be health issues, family issues, or any other issues. Advancement of technology has solved this problem, and now students can learn the missed topic from the websites present on the internet, and they can access those sites whenever and from wherever they want. The solution is a bit faulty itself, the contents and the lecture videos on the internet require good internet speed so it cannot be accessed smoothly if the internet is slow (Sutton, 2013). These online lectures also fail to motivate the students compared to physical conferences.

4. *Decline Writing Skills*

Due to the excessive usage of online chatting and shortcuts, the writing skills of today's young generation have declined quite tremendously. These days, children are relying more and more on digital communication that they have forgotten about improving their writing skills. They don't know the spelling of different words, how to use grammar properly or how to do cursive writing (Raja and Nagasubramani 2018). The decline of writing skills in young people is a serious concern.

Carr (2011) accuses technology of causing our minds to be shallow and asserts that students who read linear texts have better understanding and a stronger memory than those who read via the Internet. He argues (2011, p. 90) that "The shift from paper to screen does not just change the way we navigate a piece of writing. It also influences the degree of attention we devote to it and the depth of our immersion in it." Carr affirms that the Internet, for instance, brings about superficial, easily-distracted readers, as "When we go online, we enter an environment that promotes

cursory reading, hurried and distracted thinking, and superficial learning," (2011, p. 116).

5. *Lack of Focus*

Text messaging has become a favourite pastime of many students. Students are seen playing with their cell phone, iPhones day and night or driving and very often even between lectures. Being ever-connected to the online world has resulted in a lack of focus and concentration in academics and some extent, even in sports and extracurricular activities (Raja and Nagasubramani 2018).

Effective schools exhibited the following characteristics: a strong focus on ensuring academic success for each student; a refusal to accept excuses for poor performance; a willingness to experiment with a variety of strategies; intensive and sustained efforts to involve parents and the community; an environment of mutual respect and collaboration; and a passion for continuous improvement and professional growth (Taylor, 2012).

To conclude, there are the positive and negative impacts of education 4.0 on English language teaching. Teachers and students should take advantage of this in the good light and eliminate the drawbacks which are pulling back many of students as well as schools from achieving excellence.

Education 4.0 helps a learner to further understand the learning contexts effectively compared practicing those traditional approach. Therefore, every educator needs to change a step forward in making this positive since the students are more

favor towards using technology. Education 4.0 can be negative, as it can threaten the existence of schools and teachers, it can also be positive because brings many opportunities for innovative research and classroom practices which can subsequently accelerate and optimize teachers' professionality, productivity and students' learning outcomes.

CHAPTER IV

**IMPROVING LANGUAGE TEACHERS' PROFESSIONALISM IN 4.0
INDUSTRIAL REVOLUTION**

This chapter discusses the research findings and discussion about challenges and opportunities in teaching English in the industrial revolution 4.0. The results are displayed based on the data obtained from various sources and organized based on the themes and significance of research questions. This chapter provides the answer for the second research question about improving English language teachers professionalism in industrial revolution 4.0. The findings are explained descriptively and also followed by a discussion to provide and support the explanation coherently.

A. Professionalism Challenges in the Classroom

In Indonesia, teacher professionalism related to the ability of teachers in conducting their role and function and how they behave at school and in society context. An Indonesian teacher is characterized by excellent in nationalism and fighting spirit, faith and devotion, the mastery of science and technology, work ethic and discipline, cooperation and learning in various disciplines, insight into the future, career certainty, and inner and outer well-being (Tanang, Djajadi, Abu & Mokhtar, 2014). In carrying out professionalism duties, teacher profession as the work carried out by someone and be a source of income for life oblige to meet certain quality standards or norms and require professional education. Teachers must be own live,

control of knowledge, skills, and behaviors as a set of competence, they also require joining teacher professional development (Abu, 2014).

The ultimate goal of teacher professional development is to improve student learning outcomes and to focus on the curriculum reform process. A teacher must have a strong competences on subject matter, pedagogical skill, and understanding of school setting and learners for the effectiveness in teaching specific topics of natural and social sciences (Yendol, Hoppey & Dana, 2010). To be a professional teacher is not easy as it requires a good combination of knowledge skills, experiences and behaviors. Besides, some professionalism challenges may be faced by the teacher in the classroom. They include: crowded class, wrong syllabus, limited resource accessibility and lack of exposure.

1. *Crowded Class*

According to Emery (2012), one of the most often mentioned problems encountered by English teachers is overcrowded classes. A teaching and learning process requires a comfortable and enjoyable atmosphere in order to fulfil students' need and achieve learning goals.

According to Okebukola (2012), teaching as an activity consists of verbal interaction between students and teachers. The roles of the teacher include: imparting knowledge, ensuring the physical development of the child, helping to improve the child's behaviour, taking care of the interest of the child, helping the child with his personal problems and ensuring spiritual development of the child. These roles of the

teacher cannot effectively take place in an overcrowded situation, because there is a limit to the number of students that a teacher can manage effectively.

2. Wrong Syllabus

A syllabus is a document that contains important information about your class (Mansbach, 2016). Syllabus plays a crucial role in guiding the English language and also in other subjects. Syllabus helped the teachers to prepare the essential factors of the course and organized the overall course to teach to the students step by step. Mostly the teachers faced this problem in teaching the English language. The wrong syllabus is given to them to teach the students the English language. The teachers teach the wrong syllabus will make negative impressions on the students, and by this, the students cannot learn and speak the English language (Chung, 2016).

The disorganized, incomplete, and hard-to-read syllabus will make a negative impression on the students by showing them that you have not thought deeply about the organization of the course or what they will learn, and it may suggest that you are not very invested in giving students a high-quality experience (Cunliff, 2015).

3. Limited Resource Accessibility

Another challenge in English language teaching is the issue of resources. Garton (2011) states that in some countries, such as South Korea and Malaysia, textbooks are set; in Singapore and China, teachers can select from government-approved books, yet, it is a matter that in many countries appropriate books are either not available or not used in the classroom. Furthermore, Ajibola (2010) argues that

the inadequacy of resources also constitutes a trial to the English teaching, and the more significant number of students is a large number of sources is needed.

Besides, lack of facilities and equipment hinder teachers from embodying an effective teaching process (Fatiloro, 2015). Pande (2013) puts forward that language could only be understood by practicing all the four skills; listening, speaking, reading, and writing. Hence, the availability of teaching aids holds a vital role and needs to be provided as soon as possible. Otherwise, teachers will not be able to teach effectively. In other words, to get students familiar with English and to provide them sufficient with exposure of target language, the number of learning resources are in dire need.

4. Psychological Problems

Pande (2013) asserts that it is a common misinterpretation among students that English is the most difficult of all subjects. Similarly, Fatiloro (2015) states that the difficulty in teaching English as a foreign language is meeting students' awful attitude in practising English. For instance, students can be fearful of speaking in front of their classmates, particularly when it comes to the presence of a competitive student in the classroom, another example is related to students who enrol in English courses outside schools. According to Khajloo (2013), these students have higher academic level than others and when they "listen to repetitive low-level content for them, they find it unattractive and boring" (p. 57). Such psychological issues can affect students' motivation and learning attitude toward English language.

5. Lack of Exposure

Teaching English as a foreign language is a challenging duty in the places where English has inadequate exposure. Lack of English exposure also serves less opportunity for students to use English. Khan (2011) argues that the lack of English purposes demotivate students to practice and understand English due to students' insufficient background knowledge of English. Moreover, it gets more difficult for teachers to encourage students to be enthusiastic in using English due to the lack of English exposure (Khan, 2011).

B. Possible Ways to Improve Professionalism

Being a professional, teachers have to learn and sharpen pedagogic skill in achieving good outcomes for students. Having low pedagogic skills in teaching makes teachers are difficult to sustain student attention in learning (Chapuis, 2010). Some possible ways may help a teacher to improve their professionalism in education 4.0.

1. Teachers Should be Aware of and Adapt to the Development

Some characteristics of the 4.0 industrial revolution era are digitalization, internet of people and artificial intelligence. All of these new developments have brought about disruption in various sectors of human life, including education. The 4.0 industrial revolution can be harmful, as it can threaten the existence of schools and teachers, it can also be positive because it brings many opportunities for innovative research and classroom practices which can subsequently accelerate and

optimize teachers' professionality, productivity and students' learning outcomes (Daud, 2018). Therefore, professional teachers must be aware of and adapt themselves to this development. Teachers of this digital age, for instance, should be teachers with a critical learning mindset, keep and explore learning new things, and should able to make use of opportunities provided by the industrial revolution 4.0 for their better teaching. Integrating classroom activities with some online platforms through blended or hybrid learning is a highly recommended teaching strategy for today's' teachers. In short, if they are carried out consciously and systematically, all developments in the industrial revolution 4.0 will undoubtedly have a positive impact on the achievement of our national education goals in the future (Yahya, 2018).

As written in the law of teachers and lecturers, in the context of Indonesian education, professional teachers are required to have four competencies: professional competence, educational competence, social competence, and personal competence (Danim, 2010). Over the past 12 years, the government has been very concerned in the effort to prepare professional teachers with these four competencies. Various programs have been carried out by the government to professionalize more than 2.7 million Indonesian teachers. The plans start from conducting the teacher certification program for the in-service teachers, facilitating thousands of teachers to get their undergraduates degrees, conducting Teacher Competency Test (UKG) which is then followed by a *guru pembelajar* (the learning teacher) program, providing various kinds of training and workshops to reforming the teacher education curriculum in the

university by extending the teacher education program to be one year Teacher Education Program (PPG) in addition to the four years undergraduate program. All of these endeavours are indeed intended to improve the professionalism and educational competence of teachers to achieve the goals of national education (Naim, 2017).

Although the government has made various efforts to improve teachers' professionalism, the challenges of becoming a professional teacher in Indonesia cannot be said to be more accessible. Time keeps moving. It brings a new era with its problems and opportunities. Therefore, professional teachers are who can survive with the times and changes. They should be ones who can see the challenges and opportunities that are brought to each era and can face all the challenges and opportunities that accompany them (Hermann, 2016).

2. *Develop Collaboration with Students*

To success in the 4.0 industrial revolution era, the teachers also need students to help. Students must dare to get out of their comfort zones all this time. The focus is no longer just having enough knowledge, it must have adequate skills, managerial competence, ability to collaborate, the ability to build extensive networking, the ability to adapt the advancement of information technology, and other skills that support the birth of creativity and innovation in learning activities and of course able to answer challenges of the times (Rahman, 2018). As mentioned by Hussein (2018), the teachers can develop their collaboration with students through collaborative learning. According to Marjan & Mozhgan (2012), collaborative learning (CL) is an

educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, or create a product. In the collaborative learning environment, the learners are challenged both socially and emotionally as they listen to different perspectives, and are required to articulate and defend their ideas. In so doing, the learners begin to create their own unique conceptual frameworks and not rely solely on an expert's or a text's framework. In a collaborative learning setting, learners have the opportunity to converse with peers, present and defend ideas, exchange diverse beliefs, question other conceptual frameworks, and are actively engaged (Srinivas, 2011).

Today, all students face a world transformed by technology, in which the internet and social media create different opportunities and challenges for formal education systems. As students consider life after graduation, universities are facing questions about their destiny, especially occupation. These technologies powered by artificial intelligence are so much transforming the world that social concepts such as "post-work" are more and more defining the present period. This period requires specific skills that are not precisely the same as the skills that were necessary for the third industrial revolution where information technology was the key in all aspects. These skills are critical thinking, people management, emotional intelligence, judgement, negotiation, cognitive flexibility, as well as knowledge production and management (Marwala, 2015).

3. *Improve the Quality and the Competency of Teachers*

Hoyle (2007) states that professionalism is related to the improvement in the quality of service rather than the enhancement of status. Boyt, Lusch and Naylor (2010) explain the concept as a multi-dimensional structure consisting of one's attitudes and behaviours towards his or her job, and it refers to the achievement of high-level standards. Depending on the educational context, it is possible to say that definitions of teacher professionalism focus on teachers' professional qualifications such as being good at his or her job, fulfilling the highest standards and achieving excellence. For example, Baggini (2005) claims that for today's teachers, professionalism is interpreted in terms of what extent the teachers can use their skills and experiences related to their profession. On the most basic level, 'professional teacher refers to the status of a person who is paid to teach'; on a higher level, it can refer to teachers who represent the best in the profession and set the highest standards (Tichenor, 2015). Phelps believes professionalism is enhanced when teachers use excellence as a critical criterion for judging their actions and attitudes. In other words, professionalism is measured by the best and the highest standards (Phelps, 2016).

Stronge (2010) categorized the attributes, behaviours, and attitudes of effective teachers into six significant areas: prerequisites of effective teachers, the teacher as a person, classroom management and organization, organizing for instruction, implementing instruction, and monitoring student progress and potential. The first two areas examine the teacher as an individual, while the remaining four

explore the responsibilities and practices of teachers. He further summarizes the characteristics of professional and competent teachers into three statements: the professional teacher recognizes complexity, communicates clearly, and serves conscientiously.

Besides improving teachers' quality, the teachers also need to improve competence in facing industrial revolution 4.0, especially with the current era of digital competition. According to Kamil (2018), in the age of industrial revolution 4.0, besides providing readiness to students, teachers also need to improve their competence and quality. According to Minister of Education and Culture (2018), the teacher needs to improve professionalism regarding mentality, commitment, and condition to have power following the development of the industrial revolution 4.0, especially with the current advancements in information technology, teachers are asked not only to transfer knowledge but to be able to instil the fundamental values of character development in the use of information technology advances wisely. Professional teachers are needed, teachers who can take advantage of the progress of the superfast information technology to improve the quality of the teaching and learning process in each education unit to prepare superior human resources with global competence (Thomas, 2010).

4. Join and Participate in Teachers' Professional Development

According to Utami, Roistika, Khoirot, Hanafi & Herminingsih (2019), the revolution of Industry 4.0 brings a new stimulus to the educational system in

Indonesia and causes education transformation. The technology used in the education field is a segment of education 4.0 that can train students to improve their learning achievement. The process of teaching-learning to achieve this goal is started from the teachers' awareness of digital literacy. Lecturers as teachers or educator in higher education play a crucial role in their students' lives. Because of that, the motivation of the teachers or lecturers in joining and participating teacher professional development program must increase. The Indonesian government must support developing good quality teachers since good education is the most crucial tool to solve various problems. Teachers as lifelong learners must maintain their professional development (PD) to face challenges in education 4.0 (Utami et all, 2019).

These are the reasons why teachers should participate in professional development:

a. To find the solution to a teachers' particular problem.

According to Wong (2015), being a teacher means having communication and interaction with students. Sometimes a teacher meets a problem in the relation of teaching and learning activities. It could be a problem of ineffective teaching method, students' difficulties in receiving the materials given by the teacher, joining professional development seminar or training can help the teacher to find out the solution of the problem since in the practice or workshop, he meets other teachers and experts so he can discuss the issue.

Good and effective communication can help well trained teacher to develop good relation with students, thus, there is more positive relation between teachers and students (Baruch, Hershkovitz & P. Ang, 2015). Unavailability of teachers and poor communication by teachers are the major factors that have led students to abandon their study at a certain level (Dinu, 2015). Khan (2017) stated, the success of students is directly related to the effective communication of the teacher. Liberante (2012) opined that students and teacher relation have unlimited effect on learning, and it is very necessary for teachers to understand their students.

b. To find out the strong and weak points a teacher has.

When teachers are not able to find out their strengths as educators, they will not be able to get chance to develop their professionalism based on their power, and it will not give any benefit for them especially to have a more significant impact of self-development. A teacher who does not know their weakness will fail to find out what to change or improve because he does not know what the problems he has (Wong, 2015).

c. To improve skills based on society.

The need for society in the relation of education system changes over time. It means that a teacher should be aware of the changes and should adapt to the situation. Upgrading skill due to the changes is very important so that he will keep his knowledge and skill updated.

Teaching skills are the skills or abilities of teachers to explain concepts related to learning material (Sutisnawati, 2017). Teaching skills are pedagogical competences of a teacher. Pedagogic competence is the way teachers teach and regulate the learning system in the classroom by establishing good interactions with students (Sufelmi, 2015). Teachers' pedagogical competence is one's ability to teach which includes various aspects related to the science of educating as well as basic teaching skills.

d. To get new knowledge.

According to Wong (2015), getting new knowledge is very important for a teacher in the effort of raising his or her professional development. Gaining more experience means having more idea and creativity in teaching or delivering materials to the students. It is, indeed, able to support a teacher to create a new atmosphere in the teaching-learning activity.

Students expect teachers to be subject matter experts for the topics they teach. This means teachers should be able to answer any question a student throws their way. Professional development programs can enable teachers to expand their knowledge base in different subject areas. The more professional development a teacher undergoes, the more knowledge and industry insight he or she gains (Cassidy, 2012).

In brief, the teachers and all educational practitioners should do any necessary adjustments in this education 4.0. The key word to survive in this rapidly

changing world is the ability to adapt to change or be left behind and then die. Therefore, professional teachers must be aware of and adapt themselves to this development. This can be preceded by the awareness of all relevant parties, such as the government as the education provider, curriculum developers, teachers, and even parents about this changing world. They must have a new mindset about education and learning.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the overall conclusions based on research findings and discussion along with the recommendations related to the impact of education 4.0 on English language teaching and the possible ways to improve teachers' professionalism.

A. Conclusions

Industrial Revolution 4.0 has brought many significant changes in human life, including education. The industrial revolution 4.0 has brought positive influences on the effectiveness and efficiency of learning. Yet, it also has an impact on reducing the existence of teachers and schools, and the emergence of several new challenges which are not necessarily easier. Therefore, the aims of this study are to discover the positive and negative impacts of education 4.0 on English language teaching and to find out the possible ways to improve English teachers' professionalism in 4.0 industrial revolution.

In this study, there are the positive and negative impacts of education 4.0 on English language teaching. The positive effects of education 4.0 on English language teaching are, first, education 4.0 gives students' opportunities to set their time and place for learning. Second, education 4.0 enhances students' confidence and motivation. Third, it encourages students' independency. Fourth, education 4.0

improves students' creativity. Fifth, it establishes meaningful learning for students, sixth, it prepares the graduate for future work and life. Seventh, it creates opportunities for teachers to engage in technology in the learning process. Besides the positive impacts, education 4.0 also has negative impacts on English language teaching. First, it creates difficulties for unprepared teachers. Second, it reduces the interaction between teachers and students. Third, it demands high internet access. Fourth, it declines writing skills and the last is lack of focus.

This study provides possible ways to improve teachers' professionalism. They include: be aware of and adapt to the development, develop collaboration with students, improve their quality and competency as a teachers, join and participate in teacher professional development.
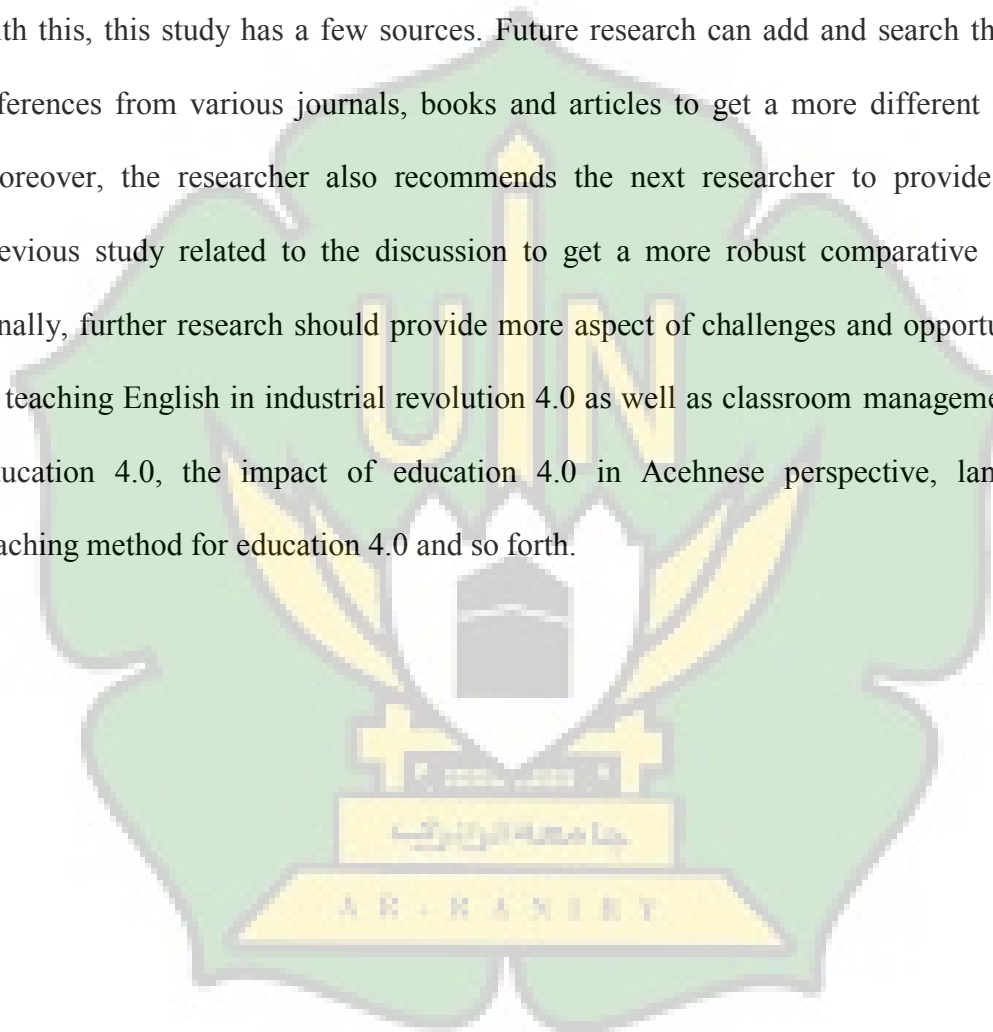
B. Recommendations

Based on the conclusions of this study, the researcher provided several suggestions regarding the impact of education 4.0 on English language teaching and the possible ways to improve teachers' professionalism. These suggestions are intended especially for teachers and future researchers.

For the teacher, to reduce the negative impacts of education 4.0 on English language teaching, the researcher hopes that the teacher should enhance students' confidence and motivation, and encourage students' independency and creativity; they should also establish meaningful learning for students. And to improve language teachers' professionalism in 4.0 industrial revolution, the teachers should be aware of

and adapt to the development and improve their quality and competency by joining and participating in teachers' professional development.

The researcher presents some recommendations for future researchers. In line with this, this study has a few sources. Future research can add and search the best references from various journals, books and articles to get a more different result. Moreover, the researcher also recommends the next researcher to provide more previous study related to the discussion to get a more robust comparative result. Finally, further research should provide more aspect of challenges and opportunities in teaching English in industrial revolution 4.0 as well as classroom management for education 4.0, the impact of education 4.0 in Acehnese perspective, language teaching method for education 4.0 and so forth.

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SURAT KEPUTUSAN DEKAN FAKULTAS TARBIYAH DAN KEGURUAN UIN AR-RANIRY
Nomor : B-17556/UN.08/FTK/KP.07.6/12/2019

TENTANG
PENGANGKATAN PEMBIMBING SKRIPSI MAHASISWA FAKULTAS TARBIYAH DAN KEGURUAN
UIN AR-RANIRY

DEKAN FAKULTAS TARBIYAH DAN KEGURUAN UIN AR-RANIRY

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b. bahwa saudara yang tersebut namanya dalam surat keputusan ini dipandang cakap dan memenuhi syarat untuk diangkat sebagai pembimbing skripsi.

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Keputusan Sidang/Seminar Proposal Skripsi Prodi Pendidikan Bahasa Inggris Fakultas Tarbiyah dan Keguruan UIN Ar-Raniry Tanggal 29 November 2019

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Pembiayaan honorarium pembimbing pertama dan kedua tersebut diatas dibebankan pada DIPA UIN Ar-Raniry Banda Aceh Tahun 2019; No.025.04.2.423925/2019 tanggal 5 Desember 2018.

Surat keputusan ini berlaku sampai akhir semester Ganjil Tahun Akademik 2020/2021

Surat Keputusan ini berlaku sejak tanggal ditetapkan dengan ketentuan segala sesuatu akan diubah dan diperbaiki kembali sebagaimana mestinya apabila kemudian hari ternyata terdapat kekeliruan dalam penetapan ini.

Ditetapkan di: Banda Aceh
Tanggal: 19 Desember 2019
An. Rektor
Dekan

Muslim Razali