PROFESSIONAL COMPTENCE OF ENGLISH TEACHERS' ALUMNI OF IAIN BENGKULU IN THE ERA OF INDUSTRIAL REVOLUTION 4.0

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A. Introduction

Since the dawn of the 21st century and the advent of the Fourth Industrial Revolution, the presence of technology has caused a shift in the function and even the role of various aspects, including humans. The Fourth Industrial Revolution has greatly affected human existence. For instance, within the field of education, there are several resources available including e-books, video-based learning on specific applications, learning apps, and internet access enabling access to knowledge.

The era of Industrial Revolution 4.0 definitely stems from the earlier revolutions, as Hussin (2018) delineates the start of the revolution with Revolution 1.0, characterized by the invention of the steam engine; Industry 2.0, with the discovery of electric power for use in production; and Industry 3.0, with humans using technology to produce and share information.

The use of digital technology to improve teaching and learning in higher education and schools, including strategies to develop teacher competency, is a crucial aspect of education amidst the technological advances of Industry 4.0. Instructors in higher education and teachers in schools are key drivers of change and must embrace the integration of technology and information to fulfill their responsibilities (Utomo, 2021).

The competencies in question are educational competence based on internet as a basic skill, technology-based entrepreneurial competence, global competence, competence in the future, and counselor competence. Furthermore, according to Government Regulation Number 16 Year 2007, a teacher is required to possess four competencies, namely pedagogical, personal, social, and professional competence.

The opinion expressed above is similar to what Wibawa (2018) stated, that educators or teachers are expected to equip students with skills appropriate for the developments of the 21st century. These skills include critical thinking, problem-solving, creativity, innovation,

communication, and collaboration. Next, students must be adept at managing and conveying information, as well as being capable of utilising technology. The 21st century skills include leadership, digital literacy, communication, problem-solving, and team-working.

In confronting the realities of the Industry 4.0 era, a teacher is expected to have teaching competencies, particularly professional competence. Objective competence indicator is mastery of subject matter, structure, concepts and mindset toward the taught subject is able to creatively develop teaching materials and utilize IT for self-development.

As one of the state Islamic universities that have a Faculty of Education in IAIN Bengkulu, it must prepare students with teaching competencies in accordance with the fourth industrial revolution. Therefore, the researchers are interested in depicting facts and realities related to the professional competence of English language teachers who are alumni of IAIN Bengkulu in the era of industry 4.0

B. Literature Review

1. Professional Teacher in Era 4.0

Asikin, Waluya & Astuti (2019) state that the 4.0 era marks the beginning of a revolution in learning, in this era elementary school students have already been using Google Assistant, which has had positive impacts. Therefore, teachers must respond to this to ensure that the education process can proceed as intended when it comes to learning in the 4.0 era. According to Astuti et al. (2019), teachers must be able to face challenges in this era by implementing strategies, knowing how to use technology effectively, helping students achieve learning goals, providing opportunities for students to excel, and reinforcing character development.

Akmal & Santaria (2020:1) state that the COVID-19 pandemic has required educators and educational observers to change their mindset in facing the challenges of the revolution 4.0 to maintain and improve the quality of education. This research reveals a decline in education quality during the pandemic, and therefore, teachers must adapt to the era of 4.0.

Putriani and Hudaidah (2021) argue that education needs to be aligned with technological developments by utilizing information and communication technology as a facility to support the education process. Based on their research findings, a correlation between the 4.0 era and the implementation of education in this era is evident.

Next, the research also reveals that every individual must possess critical thinking skills, knowledge and proficiency in digital literacy, information literacy, media literacy, and ability to use information technology. Lubis (2019) states in his research that teacher in Industry 4.0 must possess strong soft skills such as critical thinking, creativity, communication and collaboration.

According to Ritonga, Yulhendri, and Susanti (2021), in the era of Industry 4.0, not all of the teacher's roles can be replaced by technological advances, such as being a role model in action, attitude, and character. They conducted research on students' perceptions of lecturers' competencies in disruptive learning, and the results indicate that lecturers have adequate abilities in carrying out teaching tasks.

The competencies of teachers have become fundamental and strategic in the era of Industry 4.0 due to the demands of technological advancements. As of 2019, the Indonesian government has started developing education infrastructure to keep up with such progress. This text already adheres to the given principles and lacks context, so it will not be modified.

Greensten (2012) posits that the development of competencies consists of three components: thinking competencies, acting competencies, and living in the world competencies. Thinking competencies encompass critical thinking, creativity, and problem-solving abilities. Acting competencies include communication, collaboration, digital literacy, and technological literacy, while living in the world competencies comprise of initiative, self-direction, broad understanding, and social responsibility.

In the era of the 4th Industrial Revolution, the role of the teacher has changed. According to Martin-Brown (2017), the paradigm of education is characterised by students as connectors, creators, and constructivists in the production and application of knowledge and innovation. Education in practice is focused on the transfer of knowledge from teachers to students, which is considered ineffective in the era of 4.0.

The national education system in this era faces a disruptive phenomenon with the emergence of digitalisation through technological innovation and artificial intelligence. The classroom has evolved into a digital learning space, enabling more effective, varied, participative and comprehensive learning. Teachers should be able to adjust information and guide students during online learning sessions.

2. The Indicator of Professional teacher in the era 4.0

In the 21st century, commonly referred to as the digitalization era, a key indicator of a professional teacher's competence is the ability to effectively utilize technology during the learning process. Therefore, teachers must possess good digital competencies and literacy in order to keep up with the rapid changes of the times. According to Daryanto and Karim (2017), there are five categories of professionalism for teachers in the 21st century, as outlined by the International Society for Technology in Education.

Table 1

The Indicators of Professional Teacher

No	The indicators	Description
	Able to facilitate and inspire creativities	1. Encouraging, supporting and creatively modelling the discovery and generation of innovative and creative ideas. 2. Engaging students in exploring global issues and solving authentic problems using digital tools and sources. 3. Encouraging student reflection using collaboration to demonstrate and clarify understanding, thinking, and planning.
2	Designing and developing experiences in digital assessment	1. Designing or adapting appropriate learning experiences by integrating digital tools and resources to encourage student learning and creativity. 2. Creating a good space for learning that promotes students' involvement in the learning process by utilizing technology. Developing a learning environment that involves the use of technology to enable all students to be curious and actively participate in setting learning goals, managing self-regulated learning, and measuring their own learning progress.
3	Becoming model of worker in digital	1. Demonstrating proficiency in technology and transferring knowledge into new technological situations 2. Collaborating with students, colleagues and the community using digital tools and resources to promote student success and innovation. 3. Communicating ideas effectively to students, parents, and peers through various digital media formats. 4. Demonstrating and facilitating the effective use of current digital tools to analyze, evaluate, and utilize information sources in support of research and learning.
4	Encouraging and being a role model for responsibility in the digital community.	1. Encouraging, exemplifying, and teaching the healthy, legal, and ethical use of digital information technology, including respecting copyright, intellectual property rights, and documentation of learning sources 2. Meeting the diverse needs of students by using student-centered learning strategies and providing adequate access to digital tools and other digital learning resources. 3. Encourage and exemplify the appropriate use of information technology with regards to digital ethics and social responsibility. Develop and exemplify the cultivation of culture and also promote social interaction.

5	Participate in professional development and leadership	1. Contributing to the effectiveness, vitality, and self-upgrading of the teaching profession both in schools and community colleges is essential. Improving teacher competencies related to digital skills and literacy can be achieved through continuous learning, whether through training, discussions, reading books, or watching tutorials widely available online. One important consideration for smart teachers is how to effectively and responsibly use various sources of information. Avoid getting caught in hoaxes or violations that could harm the credibility of Smart Teachers. Developing skills in digital technology for teaching includes creating engaging technology-based educational materials and using social media in a healthy manner for professional and personal branding. How to operate digital learning applications and resources, how to send emails for communication purposes with colleagues, students, and parents, do not let yourself be called an outdated technologically challenged teacher, Smart Teacher. 2. Participating in local and global communities to explore the implementation of creative technology for enhancing the quality of learning. 3. Demonstrating leadership qualities by showcasing a visionary influence of technology, engaging in collective decision-making and community integration, and developing technological leadership skills in others. 4. 3. Evaluate and reflect on research and professional practices related to the effective use of digital tools and resources to promote learning success.

C. Research Methodology

The research approach used in this study is a qualitative approach with an analytical descriptive research design. This study selected high schools and junior high schools in Kaur, Seluma and Bengkulu Selatan districts in Bengkulu Province.

D. Result and Discussion

The data and information collected in the documentation show that the alumni of the Tadris English Study Programme of UIN FAS Bengkulu in the last three years are 240 people who come from ten regencies and cities of Bengkulu Province and are distributed in ten regencies and cities of Bengkulu Province. The percentage distribution of these alumni is as follows:

Table 3

Persentase Sebaran Alumni

No	Regency	Alumni	Pecentage %
1.	Kaur	25	10
2.	Bengkulu Selatan	30	13
3.	Seluma	25	10
4.	Kota Bengkulu	17	7
5.	Bengkulu Tengah	23	10

6.	Kepahiyang	27	11
7.	Rejang Lebong	22	9
8.	Lebong	20	8
9.	Muko Muko	21	9
10.	Bengkulu Utara	30	13
Total		**240**	**100 %**

1. **The Alumni of TBI Experience in Using IT**

   Based on the data obtained by researchers, in general, since entering the era of revolution 4.0, English language teachers or research respondents said that when they were in college they had gained experience related to the use of IT in learning process activities, it's just that the experience they got in college was not as sophisticated as in the current era. According to informants who teach in several schools at the junior high school and high school levels in Seluma, Manna and Kaur districts, they must develop their skills independently and seek learning opportunities to master IT.

2. **The English Teachers Alumni Creativity in Using IT**

   Based on the information obtained above from the results of the interviews that have been conducted, researchers have obtained varied information, for some respondents but in general alumni teachers have used IT in learning even though they still experience limited abilities. Furthermore, informants also said that although their ability to use IT is still at a basic level, they are motivated to adapt to technology.

3. **Learning Source**

   Based on information in the field, researchers get information that teachers have the ability to find learning resource information in the form of ebooks, videos, and audio that they download from various sources such as youtube, facebook, instagram and other sources. In this indicator, some teachers can also make some innovations to the teaching materials they find from the sources they use.

4. **Efforts in Guiding Students in Mastering Technology**

   As a teacher, of course, he must also be able to provide guidance and direction to his students in terms of mastery of technology so that they can benefit from the use of technology which is of course closely related to learning activities. Based on field data obtained in the era of the industrial revolution as it is today, teachers and students are required to be proficient in using technology and teachers must be able to create a learning

environment that is not only teacher-centred but also student-centred. Therefore, it is important for teachers to guide students in mastering it during learning hours and outside of school learning hours.

5. Publication of Learning Outcomes

In general, Alumni English teachers who teach English in Kaur Regency, Seluma Regency and South Bengkulu Regency are still at the basic competence level. Generally, they are still at the user level and intermediate level where they have not brought out creativity or published work that can be enjoyed by the wider community. From the information collected in the field, researchers only found a few samples that had learning links such as You Tube, and some teaching materials that they developed themselves in the form of compilations from several digital sources and their writings or works had not been published.

6. Level of Digitisation Ability of Alumi English Teachers

Through the questionnaire distributed or distributed to correspondents who have been designed according to the indicators as mentioned in the previous theoretical study, the researchers obtained the following data or information

Table 5

Level of Basic Competence of alumni in digital literacy

No	Basic Level	Ya	Tidak
1	Mampu menggunakan whatsApp	100 %	0 %
2	Paham cara penggunaan whatsApp	100 %	0 %
3	Mampu menggunakan Whats up dalam mengajar	100 %	
4	Mampu untuk mengkombinasikan applikasi whatsApp dengan aplikasi lain dalam proses pembelajaran daring	66 %	34 %
5	Terampil untuk mengunakan whats up dalam pembelajaran online	66 %	34 %
6	Menggembangkan penggunaan WhatsApp untuk metode tertentu	66.%	34%
7	Pernah mengembangkan WhatsApp untuk metode tertentu	66 %	34%

Table 6 Level Basic Kompetensi Literasi digital Guru Alumni

No	Level Medium	Ya	Tidak
1	Paham cara penggunaan Google acalassroom	93 %	17 %
2	Mampu menggunakan google Classroom dalam pembelajaran	93 %	17 %
3	Mampu mengkombinasikan beberapa applikasi dalam proses pembelajaran	60 %	40 %
4	Mampu membuat materi sendiri (audio, video, gambar, dan ebook) daalam google classroom	40 %	60 %
5	Pernah membuat materi Pembelajaran (audio, video, gambar, dan ebook) dan	40 %	60 %

	dibagikan keguru lain		
6	Mampu mengkombinasikan google classroom dengan aplikasi lain dalam pembelajaran	20 %	80 **%**
7	Pernah membuat materi pembelajaran (audio, video, gambar, dan ebook) dan dibagikan keguru lain	20 %	80 **%**

Table 7 Level Basic Kompetensi Literasi Digital Guru Alumni

No	Advance level	Ya	Tidak
1	Mampu menggunakan *learning management system*	30%	70%
2	Mampu membuat pembelajaran LMS dalam mengajar daring	20%	80%
3	Mampu mengembangkan LMS dalam pembelajaran	20 %	75%
4	Pernah membuat materi sendiri dan kemudian diggunakan untuk pembelajaran daring di LMS	10%	90%
5	Menggukan berbagai berbagai metode dan teknik pembelajaran Dengan LMS	20%	80%
6	Pernah mengikuti Pelatihan menggunakan LSM dalam pembelajaran daring	30%	70%
7	Pernah mengadakan pelatihan menggunakan LMS di sekolah	20%	100%

E. Conclusion

Based on the data above, it can be seen that the level of digital literacy skills in using MLS is not yet in the expert or advanced category; only 30% of alumni teachers have the ability to use MLS. Furthermore, the ability of teachers in making MLS learning is only 20% as well as the ability to use learning methods and techniques. Furthermore, among alumni who teach there are 30% who have attended training, 20% have held training while teachers who have made teaching materials on MLS are only 10%.

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