ANALYSIS OF TEACHER PROFESSIONAL COMPETENCE IN UTILIZING INFORMATION AND COMMUNICATION TECHNOLOGY

Yoan Tamara¹, Hermansyah², Marleni³

¹ SMA Negeri 1 Talang Ubi
²,³ Universitas PGRI Palembang

E-mail: ¹yoantamara797@gmail.com, ²ancha.hermansyah0312@gmail.com, ³marlenigandhi82@gmail.com

ABSTRACT
In the industrial era 4.0, information and communication technology can be used optimally to achieve good efficiency, almost all industries and agencies have used digital media. In the world of education, technology is developing rapidly after the Covid-19 pandemic, because the pandemic has forced digital changes in the world of education and we need a good understanding and knowledge about the types of students who use digital technology in the learning process. Information and communication technology is a multimedia-based learning medium technology involving text, images, sound, video and the internet. From this background, there are 2 formulations of the problem How do teachers use information and communication technology in the learning process and what are the factors that become obstacles when using ICT. This research is qualitative research and data collection is done using observation, interview tests, student assessment questionnaires against teachers and documentation. This research was conducted to analyze professional teachers who are competent in using information and communication technology in the learning process. The subjects and informants of this study were English teachers and students of class X Mia 1 and Mipa 2. The conclusion obtained after conducting interviews with English teachers and students is that in almost every meeting they use information and communication technology as a learning medium to assist teachers in explaining or describing the material to be taught so that students can easily understand the material presented and motivate students to be more creative and active in the process of learning and learning by using information and communication technology to help students find broader information and make it easier for them to communicate during the learning process. English teachers are sufficiently proficient in ICT-based learning media when the learning takes and use media according to the teaching material.

Keywords: Analysis Teacher Professional, ICT-Based Learning Media, Teacher Professional Competence.

1. INTRODUCTION
Technology in the world of education is developing very rapidly, after the Covid-19 pandemic, technology has become increasingly sophisticated and has become a medium for continuing the learning process. The COVID-19 pandemic caused a major, sudden, and dramatic digital transformation in
society. Because the pandemic forced digital changes in the world of education. And we need a better understanding or knowledge, about life, and world views about the types of students who use digital technology in the learning process. Information and communication technology is a multimedia-based learning medium (technology involving text, images, sound, video, and the internet) so that it can make the presentation of material more interesting and not monotonous so that students can easily digest and understand it. The role of technology in the learning process is very important because it makes it easier for teachers and students to access information and gain as much new knowledge as possible.

Indonesia can keep up with technological developments that are increasingly sophisticated and growing rapidly. According to (Dang, 2011, p. 102), technology is a tool that can be used to obtain information more quickly when needed and easily accessible for educational needs so that students or teachers who are accustomed to using technology have the opportunity to hone and develop experiences and skills by utilizing technology both inside and outside the classroom. Information and communication technology is an electronic tool that is currently widely used in education. In the industrial era 4.0, technology can be used optimally to achieve good efficiency and almost all industries and agencies are already using digital-based. According to Martin in the book (Syarif Hidayatullah, 2021, p.1), information technology is a computer technology that is useful for processing, storing and sending information. The development of science and technology is a very significant change in human life, both in the economic, cultural and educational fields. The world of education has seen rapid changes.

Information and communication technology is a tool that can help incorporate social aspects that enable each individual to obtain, send or exchange information with other individuals. From time to time technology is getting easier for us to find. Computers are one of the technological tools that have been found everywhere. For example at school, home, office, etc. Then, technological tools such as cellphones/mobile phones, almost everyone has them and they are not only used to make calls but can already be used as devices that are quite important in assisting the learning process so that a teacher does not only use books as a learning medium to find information, information and knowledge. Technology in the world of education is developing very rapidly, after the Covid-19 pandemic, technology has become increasingly sophisticated and has become a medium for continuing the learning process. The COVID-19 pandemic caused a major, sudden, and dramatic digital transformation in society.
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The role of technology in the learning process is very important because it makes it easier for teachers and students to access information and gain as much new knowledge as possible.

Professionalism comes from the word "profession" which means the work that someone will do. The profession is a position or work that requires special knowledge and skills and is obtained from intensive academic education. While the etymology of the profession in English is "PROFESSION" or in Latin "PROFECUS" which means to state be competent or expert in their field. (Siregar, 2018, p.4), said a profession must have three pillars such as knowledge, skills, and good academic preparation. UU no. 14 of 2005 states that there are four competencies that a teacher must have, namely: educator or teacher. They must be personal, pedagogical, social, and professional. The use of digital technology is very important. Having competence can create good performance, good performance will create recognition. And recognition will create respect, respect will create prestige.

(Munir, 2012, p. 69-70), argues that with authority the teacher will be strong against his students. The authoritative teachers didn't need much energy for their students to listen to everything they had to say. Competence can perfectly affect the achievement of an educational goal so that a student’s growth and development are the time. The growth and development of a learner depends on the ability (competence) of the teacher. In the learning process in the classroom, the four competencies possessed by the teacher are professional competence, because the teacher's professional competence is the ability or skill of the teacher in mastering the subject matter broadly. And allows teachers to guide students to meet competency standards set by national education standards.

The era of industrial revolution 4.0 is now characterized by extraordinary developments. Computers grow to be more powerful because connected to a network or the internet. As technology develops, teachers must be able to bring or keep up with changing times to create a classroom atmosphere during learning so that students are more enthusiastic about learning and become active in class so that teaching activities become more innovative and communicative. As stated by Mortini, Jaya, & Zam (2023) teaching is a profession conducted by using a combination of art, science, and skill.
Therefore the Minister of Education and Culture revised several curricula from the 2006 KTSP to the K13 curriculum which is now the Merdeka curriculum. Of course, in this case, the Indonesian government has a policy to improve the quality of education and bring many benefits to the world of education. The K13 and Merdeka curricula are competency-based which requital required learning activities in class require students to be more active and creative.

2. LITERATURE REVIEW

a. Information And Communication Technology

The use of information and communication technology has become an inseparable part of human life. And various aspects have been influenced by the development of information and communication technology ranging from individuals to government agencies. Information and communication technology (ICT) can drive changes in human civilization from the industrial era to the information age. Definition of Technology According to (Hedwig, 2010, p. 4), technology is knowledge about how to use types of technical devices both computer hardware and software used by humans so that they can be used effectively and efficiently. Technology includes hardware and software that can be used to perform and complete data processing: capturing, storing, retrieving, manipulating, and collecting data. Information technology is a science that covers various things such as Hardware and Software Systems, LAN (Local Area Network), WAN (Wide Area Network), MAN (Metropolitan Area Network), Management Information System (MIS), Telecommunications Systems, and others. Information and Communication Technology (ICT) is a technology that is used in the process of obtaining, compiling, storing, manipulating, and processing data or information to produce data that is relevant, accurate, and timely for individuals and groups. According (Mulyasa, 2011, p. 3) explains that education is defined as the process of making a person a complete human being and becoming himself who grows in line with the talents, abilities, and potential of students in a human way so that they have a superior personality.

According to (Asmani, 2011, p. 114), learning using ICT will run effectively if it can apply learning that is centred on student activities (student learned centred learning), namely:

1) Develop the ability of students to solve problems in real life (contextual), so that education becomes relevant and responsive to the demands of everyday life.
2) Foster reflective and creative thinking.
3) Helping the development and active involvement of students in the learning process.

Information and communication technology (ICT) can provide opportunities for students to develop creativity and independence. And learning that utilizes information and communication technology can produce new works that are original, of
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high value, and can be developed further. Based on the opinions of several experts above, it can be concluded that the use of information and communication technology in education is an urgent need in the current era of globalization in Indonesia. Therefore a teacher needs to utilize existing technology to support educational activities. In developing and applying information and communication technology (ICT), the Ministry of National Education is the main responsible party.

The Education Office has made every effort to encourage the use of technology in educational institutions so that they can compete in an era of increasingly stringent globalization. One that perfects the learning process is utilizing existing technology as stated in the regulation of the Minister of Education and Culture number 22 of 2016. Which states that the learning process in educational unit institutions is held interactively, inspiring, fun, challenging, and motivating. Students participate and provide broad space, creativity, and independence according to their respective talents. Interests and psychological development of students. Therefore every year the education unit implements the RPP, carries out the learning process, and evaluates the learning process to increase the efficiency and effectiveness of achieving graduate competencies based on graduate competency standards (SKL) and content standards (SI), learning must be held using curriculum principles that have been set.

b. Definition of Analysis

The analysis is an action to examine or investigate an event by using data to find out the actual situation or event. The results of analyzing can help increase knowledge. The analysis technique cannot be known, we can see from the results of calculating numbers, data sources processed by a researcher other than scores from numbers can be recordings, notes, literature reviews, interviews, etc. The contemporary Indonesian dictionary writer Peter Salim wrote (2002) explains that analysis is an investigation of an event or outlining of the subject matter and elaboration to get an exact or valid fact. The analysis is an activity to find new findings on objects to be studied or observed by researchers by finding accurate evidence on these objects. The analysis aims to break down something into small components and to find out the relationships between each of these components.

According to Hara (Azwar 2019) analysis is an activity that describes or breaks a unit into the smallest units. Spradley in Sugiyono (2015, p. 335) analysis is an activity in looking for a pattern, namely by thinking systematically by testing something in the relationship between parts, relations with the whole, e and being able to determine parts. Analysis can be carried out with a careful and precise process to get results that match the actual situation. If we do the analysis there are several ways to do the analysis properly, namely: preparing data, and choosing an analysis method.

c. Definition Of Teacher Professional
Professional teachers can carry out their duties by meeting competency standards. (Sumardi, 2016, p. 12) says that a professional teacher must have the ability to master subjects as the main capital to carry out their duties properly and succeed by expectations and goals, therefore teachers must equip themselves with broad insights and various other sciences. In Law No. 14 of 2005 Article 8, it is written several things that must be owned by teachers and lecturers:

1) Academic Qualification, minimum Bachelor's Degree or Diploma 4.
2) Competence, which will be emphasized again in teacher professional education.
3) Educator Certificate, given after carrying out teacher certification and being declared capable of meeting professional standards.
4) Physical and Spiritual Health.
5) Have the ability to support the realization of National Education Goals.

With advances in information and communication technology (ICT), teachers must be familiar with various digital learning media that are currently popular so they can utilize and optimize them, such as Google Classroom, E-Mail, WhatsApp, Zoom, YouTube, and others. According to (Suyanto, 2013, p. 5), to become a professional teacher must have minimum standards, including having good intellectual abilities, and being able to understand the subject matter. vision and mission of national education, have the skills to transfer knowledge to students effectively, understand the concept of the development of child psychology and have creativity and art in teaching. The requirements to become a professional teacher must have new standards and paradigms in shaping the profile of Indonesian professional teachers in the era of the digital revolution 4.0. According to (Danim. 2010, p. 44), teachers are professional educators and their main task is to educate, teach, guide, and evaluate students with formal education. The teacher is a teacher whose main task is to educate, they are someone who is always looked up to and imitated. Professionals are people who get wages or salaries for what they do well. Professional teachers are people who have obtained knowledge from appropriate educational institutions, and teacher performance is based on the knowledge they already have or have special abilities.

d. Teacher Duties And Responsibilities

A teacher has the responsibility to educate or mature students. The responsibility and duties of a teacher are to instil faith, instil the nation's future, and educate students to have noble character. Becoming a teacher must have a sense of responsibility and expertise starting from mastering child psychology, mastering learning methods, mastering pedagogy, being creative and innovative, mastering the curriculum, and utilizing technology in learning English in the National Education system. Learning it is not easy and requires high thinking and skills. We know that English consists of components of
knowledge (knowledge) and skills (application). The science component at least includes grammar, vocabulary, spelling, and pronunciation. And skills (application) include grammar, vocabulary, spelling, and pronunciation while skills include: listening, reading, writing, and speaking. In using English applied to language skills.

3. METHODS

According to (Sugiyono, 2019, p. 18) data analysis in research is carried out when data collection is in progress and after completion of data collection within a certain period. This study uses a qualitative approach using data analysis techniques methodology because a method that focuses on in-depth observation so when using this method in research can obtain more comprehensive research results. I was doing this research at SMA NEGERI 1 TALANG UBI which is located at Jl. Talang Subur, South Talang Ubi, Talang Ubi District, PALI District. South Sumatra. And the research was conducted in the even semester of 2022/2023. The objective of this research was to be an English teacher and a student’s grade 10th of SMA Negeri 1 Talang Ubi. The informant or subject in this was a research English teacher and a student in grade 10th at SMA Negeri 1 Talang Ubi. The data collection technique used is by using the instrument:

1. Observation

According to (Sugiyono, 2019, p. 203), observation as a data collection technique has more specific characteristics when compared to other data collection techniques. I will make a direct observation of the school to see how the teachers develop mastery of information and communication technology. What media is used during the learning process? The researcher will make frank observations. The researcher doing the data collection stated directly or frankly to the data source that he was doing research. So those who are studied know from beginning to end about the activities the of researcher. According to Patton in Nasution (Sugiyono, 2013, p. 228), states that the benefits of observation are:

a. By observing directly in the field it is easier for researchers to understand the context of data in all social situations, so a holistic or comprehensive view can be obtained.

b. By observing, you will get direct experience, allowing researchers to use an inductive approach, so they are not influenced by previous concepts or views. The inductive approach opens up the possibility of making discoveries or discoveries.

The object of research in carrying out research using qualitative methods which were observed consisted of three components, namely: Place, actor, and activity.

2. Interview

According to (Sugiyono, 2019, p. 195), interviews are used as a data collection technique if the researcher wants to conduct a preliminary study to find problems that must be studied and if the researcher wants to know things from respondents who are more in-
depth and the number of respondents is less. We can conduct interviews in a structured or unstructured manner and interviews can also be conducted in person (face to face) or via telephone. Structured interviews are a data collection technique, if the researcher already knows for sure about the information to be obtained, the researcher has prepared written questions in which alternative answers have been prepared.

3. Questionnaire.

According to (Sugiyono, 2013, p. 142), a questionnaire is a data collection technique that we can do by asking questions to respondents, and respondents are required to provide answers. Questionnaires are a fairly efficient data collection technique if the researcher knows the variables to be studied, and the researcher also knows that the number of respondents is sufficient and widely spread. Questionnaire techniques can be in the form of closed or open questions. Uma now in the book (Sugiyono, 2013, p. 161), states that writing a questionnaire has principles, namely: principles of writing, measurement or physical appearance.

4. Documentation

Comes from the word document which means "written stuff". Documentation technique is a way of collecting data by recording existing data and this technique is easier than other data collection techniques. According to Sugiyono (Hardani, 2020, p. 165), documents are records of events that have passed and documents in the form of writing, pictures, or monumental works of a person. Written documents are diaries, life histories, biographies, and documents in the form of drawings, which are sketches, and others. Documentation techniques are complementary techniques to observation and interview techniques in qualitative research.

Testing the validity of the data in research, often only emphasizes the validity and reliability tests. In quantitative research, the research instrument is used to obtain valid and reliable data, while in qualitative research it is the data that is tested. Susan Stainback (Hardani, 2020, p. 198), argues that quantitative research places more emphasis on aspects of reliability while qualitative research focuses more on aspects of validity. The value of the findings is significant or significant. The criteria used in qualitative research are that the results of the research carried out must meet four criteria, namely: credibility; transferability; dependability; and confirmability:

a. Credibility

According to (Hardani, 2020, p. 201), this criterion is to fulfil the data and information that has been collected and must contain a truth value, and the results of qualitative research must be trusted by readers who have a critical mindset and are easily accepted and understood by people. the respondents or those who provide information that has been collected during the information took place. In the book (Sugiyono, 2013, p. 267), to say that research results are by the context, qualitative research needs to pass a credibility test which consists of 6 ways,
namely: extending research time, increasing observation persistence, triangulating according to existing rules, conducting check with other members of the group, analyze negative cases and use appropriate references.

**b. Transferability**

This criterion is the result of research conducted in a particular context and can be applied or transferred to other contexts or other settings to build transferability. This research is carried out with a detailed description. Meleong (Hardani, 2020, p. 205), this research technique will produce a research report that is as thorough and accurate as possible which describes the context in which the research was carried out concerning the research focus. With a very detailed description, it reveals everything that is needed by the reader to understand the findings obtained by a researcher. Transferability is external validity in qualitative research. External validity indicates the degree of accuracy or research results that can be applied to the population where the sample is taken. Sanafiah Faisal (Sugiyono, 2013, p. 276), if the reader of the research report gets a clear picture and the research results can be applied (transferability), then the report meets the standard transferability requirements.

**c. Dependability**

This criterion is used to ascertain whether qualitative research is of good quality or not. According to (Sugiyono, 2013, p.277), reliability is reliable research if other people can repeat the research process. Dependency testing can be done by auditing the entire research process. It often happens that a researcher does not carry out research in the field but can provide data. If the research is not conducted but the data is there, the research is said to be unreliable or dependable. Sanafiah Faisal (Sugiyono, 2013, p. 277), if a researcher does not have or cannot see "tracks of field activity", then research dependability must be suspected.

**d. Confirmability**

This criterion is used to assess whether the results of a person's research are qualified or not. If the "dependency audit" can be used to assess the quality of the process that has been carried out by researchers so that it can provide research results. Then the "confirmity audit" can be carried out simultaneously with the "dependency audit". But the emphasis of “audit confirmation” has to do with the question of whether the data and information and interpretations etc. in a research report are supported by material that is already available or used in “trial audits”. If the "confirmability audit" has determined that the research results have met all research standards (truth value, applicability, consistency, and neutrality), then the results of a study can be accepted or the results of the research are of high quality.
Qualitative research is research that must meet the requirements as a discipline. Any qualitative research should be conducted to address a significant problem. Data analysis techniques are processes for processing data and information in the research process, and these data will be used as research results or new information. (Sugiyono, 2019, p. 15). The process of data analysis is carried out using three steps: Data Reduction, Data Display, and Concluding Drawing Verification. Researcher use data reduction technique.

a. Data Reduction

According to (Sugiyono, 2019, p. 323), data reduction is a data analysis technique that is carried out by summarizing and concluding the main points and focusing on the important things looking for themes and patterns. Reduced data can provide a clear view and easy to understand. When researchers reduce data, each researcher will be guided by the goals to be achieved. The main purpose of qualitative research is discovery. If the researcher finds something that is considered foreign, and does not know yet has a pattern, that is what the researcher pays attention to in carrying out data reduction.

b. Data Display

Miles and Huberman (Sugiyono, 2019, p. 325), which is often used in presenting data in research using qualitative methods in the form of narrative text. the presentation of data can be in the form of tables, graphs, phir charts, pictograms, etc. Through the presentation of data, the data can be organized and arranged in a relationship so that the data is easier to understand.

c. Concluding Drawing Verification

The conclusion obtained in qualitative research is a new finding. And the discovery is in the form of a description or description of an object whose truth was not previously known and after being examined we can find out the truth, in a casual, interactive, hypothetical, or theoretical form.

4. RESULTS AND DISCUSSION

The researcher will explain the results of observations, interview results, questionnaires, and documentation of research data. That is how competent professional teachers use information and communication technology as learning media. The research was conducted in one of the districts in Palembang, namely Penukal Abab Lematang Ilir (PALI), by looking for informants who met the criteria that had been applied in this study. In finding and collecting data this research uses qualitative methods with descriptive studies to collect data. At the data analysis stage, the researcher made a list of questions that were used to interview the English teacher and made a student assessment questionnaire for the English teacher as an informant for data collection. This research was conducted at SMA Negeri 1 Talang Ubi.

1. Result Observation

After the researcher made observations at school and observed the English teacher's activities, the teacher used ICT-based learning media as media such as PowerPoint, YouTube,
Google, etc. And the teacher displays learning media in burning objectives, the teacher uses PowerPoint to help present and clarify teaching material, and the teacher uses interactive learning media because the media is a tool or intermediary media to convey learning material from teacher to student.

Table 1. Observation Schedule

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>31 May 2023</td>
<td>07.00-Finish</td>
</tr>
<tr>
<td>Monday</td>
<td>05 June 2023</td>
<td>07.00-Finish</td>
</tr>
<tr>
<td>Tuesday</td>
<td>06 June 2023</td>
<td>07.00-14.00</td>
</tr>
</tbody>
</table>

2. Result Interview

After making direct observation at the school, the researcher conducted interviews with the English teacher to obtain further data. Interviews were assisted by using notebooks and recording devices for a researcher to take the main points of conversation or interviews. The initial stage carried out by the researcher was to make a list of questions that would be used to interview the teacher as an informant for data collection. Which will then be analyzed to find out how the information provided by the informant. This interview was conducted by a researcher in May and June 2023, the results of the research were obtained using in-depth interviews with informants as a form of seeking data information and were directly involved in the field which would then be analyzed. In the world of education, technology is also progressing and developing so that all schools and tertiary institutions have planned the development of ICT in learning for participants by ensuring the quality of education, so teachers and students must be ready to utilize or use information and communication technology in the learning process.

From the conversations conducted by researchers and teachers, the teacher is developing ICT for interactive and efficient learning media. The ability of professional teachers information and communication technology as a learning medium for teachers at SMA Negeri 1 Talang Ubi can use and determine what media will be used as a tool in the learning process and facilitate the teacher’s task in conveying material to students. From the results of the interviews that the researcher conducted with the English teacher, they were quite familiar with information and communication technology. And teachers quite often use ICT-based learning media to help them in the learning process and make students more motivated to carry out the learning process and make them more active and creative so that the learning process that takes place does not feel monotonous or boring.

Table 2. English Teacher Interview Schedule

<table>
<thead>
<tr>
<th>Informant’s Name</th>
<th>Date</th>
<th>Time</th>
<th>Interview Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hendrisman, M.Pd., M.Si</td>
<td>07 June 2023</td>
<td>09:00-Finish</td>
<td>Vice Principal’s room</td>
</tr>
<tr>
<td>Dra. Nurleli</td>
<td>08 June 2023</td>
<td>10:00-14.00</td>
<td>Teacher’s room</td>
</tr>
<tr>
<td>Maya Marzuki</td>
<td>08 June 2023</td>
<td>13:00-14.00</td>
<td>Teacher’s room</td>
</tr>
</tbody>
</table>
This research was conducted to find out or analyze how a competent professional teacher uses information and communication technology as a learning medium. The English teacher uses to prepare the teaching modules and what material will be delivered to students along with what media will be suitable for the teaching material so that it can help students more easily understand the material presented and the media that is appropriate to the teaching material. English teachers often use internet media, PowerPoint, LCD projectors, YouTube, etc. The existing facilities and infrastructure at school have also been accommodated to support teacher-teacher-teaching tips using ICT-based media so that the learning process can run well and be more efficient and optimal. English teachers often use interesting and creative teaching media in the learning process and always motivate students by using ICT-based media so that students feel more motivated and more active in learning.

5. CONCLUSION

This research can be concluded that learning by using learning media based on information and communication technology can help teachers and make it easier to explain or present material to students. From the results of observations and informants who have conducted or researched teachers and students can take advantage of information and communication technology that existed in the 4.0 era and the results of the research English teachers are quite familiar with and can use ICT-based learning media by the
material using information technology-based learning media and communication makes it easier for students to understand the material presented and helps them to communicate with English teachers. Based on the results of the discussion and conclusions outlined, suggestions can be given by researchers to teachers of English subjects in particular. If you want to use learning media based on information and communication technology, students will still be supervised when using media such as the Internet, etc. And if students bring personal mobile phones, students are expected to use them only during class hours and directions from the teacher.

6. ACKNOWLEDGEMENT

Alhamdulillah, praise be to Allah SWT, for His boundless blessings and guidance that have enabled me to complete this thesis entitled "Analysis of Teacher Professional Competence in Utilizing Information and Communication Technology." All gratitude and thanks are due to Him for the strength, wisdom, and perseverance bestowed upon me throughout this academic journey.

7. REFERENCES


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Yoan Tamara¹, Hermansyah², Marleni³


