

## CHAPTER IV

### FINDINGS AND DISCUSSION

In this chapter present the findings and discussion of the research. The research would provide the data by using questionnaires, interviews and observations. A total of 20 questionnaires were filled out by 5 English teachers knowing their understanding of the TPACK concept and there were 11 questions to answer the application of the TPACK concept in learning English.

#### A. Findings

In this section, the findings that are displayed based on the two researches question raised as follow:

#### A. The Teachers Understanding of the TPACK Concept at Junior High School

The findings of the first research question are displayed by questionnaire to answer understanding teacher of TPACK Concept. The resulting data of participating EFL responses are displayed in the form of chart below. The findings are reported in sequence as follows:

##### a. Technological Knowledge

##### 1) I Know How to Solve Technical Problems in Technology

No	Category	Frequency	Percentage
1.	Strongly Agree	1	20%
2.	Agree	4	80%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.1 Finding 1**

Based on the data above, it can be inferred that the respondents of EFL 1, EFL 2, EFL 3 and EFL 4 totaling 4 people with a percentage of 80% answered Agree with the above statement regarding technology knowledge. Then EFL 5 answered Strongly Agree with a percentage level of 20%. Based on the formula contained in chapter III, their mastery of technological knowledge in terms of solving problems that occur in technology is Excellent category with percentage 84%.

**2) I can Learn Technology Easily**

No	Category	Frequency	Percentage
1.	Strongly Agree	2	40%
2.	Agree	3	60%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.2 Finding 2**

In finding 2, there are two answers, namely Strongly Agree and Agree, in the data there are 2 respondents, namely EFL 1 and EFL 5 who answered Strongly Agree with a percentage of 40% in answering questionnaire number 2. As for EFL 2, EFL 3 and EFL 4 which amounted to 3 people answered Agree in the statement with a percentage of 60%.

Based on the formula contained in chapter III, their mastery of technological knowledge in learn technology easily is Excellent category with percentage 88%.

### 3) I Keep Abreast of Important New Technology

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	4	80%
3.	Unsure	1	20%
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.3 Finding 3**

In finding 3, it can be seen that the number of respondents who answered Agree were 4 people namely EFL 1, EFL 2, EFL 3 and EFL 5 with a percentage of 80%. The respondents who answered elements amounted to 1 person, namely EFL 4 with a percentage of 20%. With this, there is 1 out of 5 respondents whose answers are different from the others. Based on the main of the interview with EFL 4, because she was not sure if she always followed the latest technology, because sometimes the technology that was often used was quite able to make it easier for her to teach.

Based on the formula contained in chapter III, their mastery of technological knowledge in keep abreast of important new technology is Good category with percentage 76%.

### 4) I Know a lot about Different Technologies

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	4	80%
3.	Unsure	-	-
4.	Disagree	1	20%
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.4 Finding 4**

Based on the table above, it can be concluded that the 4 respondents who answered Agree were EFL 1, EFL 3, EFL 4, and EFL 5 with a percentage of 80%. While answering disagree, there was 1 person, namely EFL 2 with a percentage of 20%. In this case 4 out of 5 respondents answered agree and 1 respondent answered disagree. Based on the main interviews with EFL 1, EFL 3, EFL 4, and EFL 5 have in common in knowing many different technologies. Meanwhile, EFL 2 who voted for disagree gave a statement that it did not know many different technologies.

Based on the formula contained in chapter III, their mastery of technological knowledge in know a lot about different technologies is Good category with percentage 72%.

#### **5) I Have the Technical Skills to Use the Internet and Computers Effectively**

	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
1.	Strongly Agree	2	40%
2.	Agree	3	60%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.5 Finding 5**

In finding 5, it can be concluded that teachers' knowledge of technological knowledge to use the internet and computers effectively have similarities in choosing answers. 2 respondents, namely EFL 1 and EFL 5 answered Strongly agree with a percentage of 40%. Meanwhile, EFL 2, EFL 3, and EFL 4 answered agree with a percentage of 60%. In technological

knowledge, the statement shows that the use of the internet and computers is effective in helping the learning process. Based on the formula contained in chapter III, their mastery of technological knowledge in have the technical skills to use the internet and computers effectively is Excellent category with percentage 88%.

**b. Content Knowledge**

**1) I Have Sufficient Knowledge about the Subject Matter**

No	Category	Frequency	Percentage
1.	Strongly Agree	1	20%
2.	Agree	4	80%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.6 Finding 6**

From finding 6 regarding Content Knowledge, it can be inferred that there are 4 respondents who answered Agree including EFL 2, EFL 3, EFL 4, and EFL 5 with a statement that they have sufficient knowledge about the subject matter with a percentage of 80%. Meanwhile, 1 respondent, namely EFL 1, chose the answer Strongly Agree with a percentage of 20%.

It can be concluded that the English teacher's understanding of the material to be taught to students is related to one of the basic TPACK concepts, namely Content Knowledge is Excellent category with percentage 84%.

## 2) I Have a Variety of General Knowledge and Companion

### Knowledge in Delivering Subject Matter

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	5	100%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.7 Finding 7**

From finding 7, regarding content knowledge, it can be inferred that all English teachers including EFL 1, EFL 2, EFL 3, EFL 4 and EFL 5 choose Agree that they have a variety of general knowledge and companion knowledge in delivering subject matter.

In this case, it can be concluded that their knowledge of learning materials is Good category with percentage 80%. It's mean that the subject matter obtained is not only general knowledge but is interspersed with complementary knowledge in delivering learning materials that will be taught to students in class.

## 3) I can Provide Critical Answer to Students Who Ask

No	Category	Frequency	Percentage
1.	Strongly Agree	2	40%
2.	Agree	4	60%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.8 Finding 8**

From finding 8, regarding content knowledge, it can be inferred that there are 3 respondents, namely EFL 2, EFL 3, and EFL 4 who gave the

answer, namely agree with a percentage of 60% and 2 other respondents, namely EFL 1 and EFL 5 who gave Strongly answers. Agree with the percentage of 40%. In terms of content knowledge, EFL is able to provide critical answers to students who ask questions. Indeed, a teacher not only masters the material being taught but is able to provide critical answers so that students can easily understand them in class during learning.

Based on the formula contained in chapter III, their mastery of content knowledge in can provide critical answer to students who ask is Excellent category with percentage 88%.

### c. Pedagogical Knowledge

#### 1) I am able to Organize Online/Offline Learning

No	Category	Frequency	Percentage
1.	Strongly Agree	1	20%
2.	Agree	4	80%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 9 Finding 9**

From finding 9, regarding pedagogical knowledge, it can be inferred that there are 4 respondents namely EFL 1, EFL 2, EFL 3 and EFL 4 who gave Agree answers with a percentage of 80%. And 1 respondent, namely EFL 5 who gave Strongly Agree answers with a percentage of 20%. It can be concluded that EFL's understanding of pedagogical knowledge with the statement that they are able to organize online/offline learning is quite good. That is, EFL is able to manage classroom learning both online/offline

Based on the formula contained in chapter III, their mastery of pedagogical knowledge in the teacher are able to organize online/offline learning is Excellent category with percentage 84%.

**2) I am able to Help My Students to Reflect on Their Learning Strategies**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	5	100%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 10 Finding 10**

From finding 10, it can be inferred that all English teachers namely EFL 1, EFL 2, EFL 3, EFL 4 and EFL 5 choose Agree that there are able to help students to reflect on their learning strategies with percentage 100%. Based on the formula contained in chapter III, their mastery of pedagogical knowledge in the teacher are able to help the students to reflect on their learning strategies is Good category with percentage 76%.

**3) I am able to Adapt the Teaching Style to Different Students**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	5	100%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.11 Finding 11**

From finding 11, it can be inferred that all English teachers namely EFL 1, EFL 2, EFL 3, EFL 4 and EFL 5 chose the Agree answer with a



percentage of 100% that they are able to adapt the teaching style to different students. It can be concluded that, regarding Pedagogical Knowledge, EFL is able to adapt different learning strategies according to the learning level of students in the class.

Based on the formula contained in chapter III, their mastery of pedagogical knowledge in the teacher are able to adapt the teaching style to different students is Good category with percentage 80%.

**d. Pedagogical Content Knowledge**

**1) I am able to Choose an Effective Teaching Strategy to Guide during Online/Offline Learning**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	5	100%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 12 Finding 12**

From finding 12, it can be inferred that all English teachers namely EFL 1, EFL 2, EFL 3, EFL 4 and EFL 5 choose Agree. Based on the formula contained in chapter III, their mastery of pedagogical content knowledge in the teacher are able to adapt the teaching style to different students is Good category with percentage 80%.

**2) I am able to Choose an Effective Teaching Approach to Students according to the Subject Matter Given**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	5	100%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 13 Finding 13**

Based on finding 13, it can be inferred that all English teachers namely EFL 1, EFL 2, EFL 3, EFL 4 and EFL 5 choose Agree that they are able to choose an effective teaching approach to students according to the subject matter given. Based on the formula contained in chapter III, their mastery of pedagogical content knowledge is Good category with percentage 80%.

**3) I Prepare a Lesson Plan before Teaching**

No	Category	Frequency	Percentage
1.	Strongly Agree	1	20%
2.	Agree	3	60%
3.	Unsure	1	20%
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 14 Finding 14**

In finding 14, it can be inferred that there are 3 respondents who answered Agree including EFL 2, EFL 3, and EFL 4 with a percentage of 60%. 1 respondent, namely EFL 1, answered Strongly Agree with a percentage of 20%, while the last respondent, EFL 5, answered unsure with a percentage of 20%. From the data above, 80% of EFL agree with the statement of preparing lesson plans before teaching. Because it will be a

reference when teaching in class. Meanwhile, EFL 5 answered elements because he stated that there was no need to bring a lesson plan into the classroom because the lesson plan was already out of hand.

Based on the formula contained in chapter III, their mastery of pedagogical content knowledge is Good category with percentage 80%.

**e. Technological Content Knowledge**

**1) I Know about Technology that can be Used to Understand and Practice the Subjects Given**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	5	100%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 15 Finding 15**

From finding 15, it can be inferred that all English teachers namely EFL 1, EFL 2, EFL 3, EFL 4 and EFL 5 choose Agree that they are knows about technology that can be used to understand and practice the subjects given. Based on the formula contained in chapter III, their mastery of technological content knowledge is Good category with percentage 80%.

**2) I Use Technology as a Way to Provide Subject Matter**

No	Category	Frequency	Percentage
1.	Strongly Agree	1	20%
2.	Agree	3	60%
3.	Unsure	1	20%
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 16 Finding 16**

Based on finding 16, it can be inferred that there are different answers. There are 3 respondents who answered Agree namely EFL 1, EFL 2, and EFL 4 with a percentage of 60%. Then EFL 5 answered Strongly Agree with a percentage of 20% and EFL 3 answered unsure with a percentage of 20%. Based on the formula contained in chapter III, their mastery of technological content knowledge is Good category with percentage 80%.

**f. Technological Pedagogical Knowledge**

**1) I Use a Computer Application Such as Microsoft Word, Power Point in Learning or Teaching Practice**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	4	80%
3.	Unsure	-	-
4.	Disagree	1	20%
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4.17 Finding 17**

Based on the table above, it can be inferred that there are 4 respondents including EFL 2, FL 3, EFL 4 and EFL 5 who chose the answer Agree with a percentage of 80%. While EFL 1 answered Disagree with a percentage of 20%. Based on the essence of the interview with EFL 1 who answered Disagree, she stated that in practice it is very rare to use Microsoft word or PPT, she mostly use videos from YouTube, listening to songs. Because it will make learning in class more fun and students are easy to digest learning.

Based on the formula contained in chapter III, their mastery of technological pedagogical knowledge is Good category with percentage 72%.

**2) I can Select Technologies to use in My Classroom that Enhance what I Teach, how I teach and What Students Learn**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	5	100%
3.	Unsure	-	-
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 18 Finding 18**

In finding 18, it can be inferred that all English teachers namely EFL 1, EFL 2, EFL 3, EFL 4 and EFL 5 choose Agree that they can select technologies to use in my classroom that enhance what I teach, how I teach and what students learn. Based on the formula contained in chapter III, their mastery of technological pedagogical knowledge is Good category with percentage 80%.

**g. Technological Pedagogical Content Knowledge**

**1) I can Teach Lessons that Appropriately Combine English, Technologies, and Teaching Approach**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	3	60%
3.	Unsure	2	40%
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 19 Finding 19**

Based on finding 19, it can be inferred that there are 3 respondents who answered Agree namely EFL 1, EFL 2 and EFL 3 with a percentage of 60%. While the 2 respondents who answered Unsure were EFL 4 and EFL 5 with a percentage of 40%. In this case, 3 respondents chose the answer Agree with the statement that they can teach lessons that appropriately combine English, technologies, and teaching approach. Based on the essence of the interview with 2 respondents who chose the unsure answer, they do not always use English when teaching in class, because if they use full English, students will have difficulty understanding the lesson.

Based on the formula contained in chapter III, their mastery of technological pedagogical content knowledge is Good category with percentage 72%.

**2) I Apply Learning Strategies and Use Different Technologies in Learning Practice**

No	Category	Frequency	Percentage
1.	Strongly Agree	-	-
2.	Agree	3	60%
3.	Unsure	2	40%
4.	Disagree	-	-
5.	Strongly Disagree	-	-
	Total	5	100%

**Table 4. 20 Finding 20**

Based on the table above, it can be inferred that there are 3 respondents who answered Agree namely EFL 1, EFL 3 and EFL 5 with a percentage of 60%. While the 2 respondents who answered Elements were EFL 2 and EFL 4 with a percentage of 40%. In this case, 3 respondents chose the answer Agree with the statement that they apply learning

strategies and use different technologies in learning practice. Meanwhile, the other 2 respondents chose the answer from Element with the statement that they did not apply learning strategies and use different technologies in learning practice.

Based on the formula contained in chapter III, their mastery of technological pedagogical content knowledge is Good category with percentage 72%.

## **B. The Implementation of the TPACK Concept on English Teacher Competence in English Teaching at Junior High School**

The findings of the second research question are displayed in relation to implementation of the TPACK concept on English teacher competence in English teaching. The data collection technique used was through observation and interviews with 11 questions related to the implementation of the TPACK concept in learning English.

In this second research question, the researcher conducted observation with 5 English teachers, but there is a teacher who cannot be observed due to time constraints. The data obtained, as follows:

### **a. Teacher A**

Based on observations made by researcher on February 16, 2022, as follows:

Before starting the lesson, the teacher checks the students' attendance first. After that, the teacher asked a representative from one of the students to lead a prayer before studying. In this English subject, the teacher usually asks students to provide an English dictionary to make it easier for students to translate unknown vocabulary.

In this class, the teacher uses a laptop as the technology she usually uses. The use of this laptop is to make it easier for teachers to provide teaching materials that will be taught to students in class. It's related based on the results of interviews with questions about Technological Knowledge, almost all respondents answered that they use technology to support



learning. This is in accordance with the data obtained by researchers, as follows:

*“Jelas saya menggunakan teknologi, seperti internet untuk membrowsing materi untuk melengkapi materi yang ada dibuku kemudian laptop dan terkadang juga menggunakan LCD.”*

“Obviously I use technology, such as the internet to browse material to complement the material in the book, then a laptop and sometimes also use the LCD.” (EFL 2)

Also, the use technology in classroom makes effective for teacher to teach to student. It is related to the Technological Pedagogical Knowledge aspect. The results obtained from interviews, as follow:

*“Tentu efektif, karena jika penggunaan teknologi/media yang tepat maka akan materi yang akan diajarkan mudah diserap oleh siswa.”*

“Of course, it is effective, because if the right technology/media is used, the material to be taught will be easily absorbed by students.” (EFL 2)

Then the teacher asked the students to open the book page 56 in Chapter VIII. In this chapter the teacher explains the material about active & passive voice. From the researcher's perspective, the teacher has enough knowledge about the Active & Passive voice material, where the teacher provides a detailed but not long-winded explanation so that it makes it easier for students to understand the material being taught. Then, the teacher also provides opportunities for students to raise their hands if they feel that the material being taught has not been understood.

After the teacher explained the material, the teacher asked the students to read a text on page 58 of the book entitled “Wonderful Indonesia”. First, the teacher reads the text first, then the students repeat what the teacher says. Then, the teacher divides the students according to the sitting row into 4 rows and every 2 rows read 3 paragraphs and the other 2 rows read 3 paragraphs. The teacher asks the representative of each line to be a representative of his friends to read the text and repeat the words of the line representative.

In this case, the teacher plays an active role in listening to students' readings and tries to provide corrections to students' readings. The teacher gives a plus to the student representatives who want to come to the front of the class to lead the reading of the text. This is given as a form of appreciation of teachers to students.

As a class assignment, the teacher asks students to answer 10 questions related to the reading text. Students are asked to choose only 5 questions and answer these questions in the exercise book. After the students answered, they also discussed to answer the 5 questions. And the teacher gives an assessment to students based on the scores obtained by students in answering the question.

The teacher divides the students into 8 groups to look for material about "Text Report". Students are given the freedom to search for the material, whether from the Internet, YouTube or various other learning

applications. It is related to the application of the TPACK concept in the classroom which is supported by interview data, as follows:

*“Penggunaan teknologi dalam Bahasa Inggris penting untuk memudahkan kita dalam pembelajaran. Memudahkan siswa juga untuk mengeksplorasi sendiri materi yang akan dipelajari.”*

“The use of technology in English is important to facilitate our learning. It also makes it easier for students to explore the material to be studied on their own.” (EFL 2)

At the end of the lesson, the teacher gives a task for the next meeting, which is to ask students to make vocabulary Verbs 1-3. And ask students to memorize the vocabulary of the verb and deposit it in front of the class.

#### **a. Teacher B**

Based on observations made by researcher on February 18, 2022, as follows:

Before starting the lesson, the teacher checks the students' attendance first. After that, the teacher asked the class leader to lead a prayer before studying. Before starting the lesson, the teacher asked several students to review the material learned at the last meeting. And students also explain the material that they remember at the previous meeting. The researchers assessed that what the teacher did was very useful for students so that students always remember the material they have learned.

At this meeting, the teacher continued the previous material, namely "Passive voice". In this material, the teacher has sufficient knowledge of the material being taught. She uses compulsory teaching resources, namely books that have been provided from school and he also has other English

books to support the material to be taught. The researchers see that teachers have quite mature preparation for the material being taught, which uses mandatory books from schools and other supporting books. In terms of the Content Knowledge aspect, the teacher already has sufficient knowledge of the material being taught. It also, supported based on the data interview, as follow:

*“Sumber materi pelajaran sudah disediakan sekolah, karena itu buku wajibnya. Tetapi dibuku tersebut masih kurang lengkap, jadi saya menambahkan materi mendapatkannya di internet, youtube.”*  
“The source of the subject matter has been provided by the school, because it is a mandatory book. But the book is still incomplete, so I added the material to get it on the internet, youtube.” (EFL 4)

After explaining the material about “Passive Voice”, the teacher held a game called “Odd/Even”. This game has often been done by teachers to students, so students already understand the rules of the game. In this game, the teacher asks students to count, if students who get numbers 1,3,5..etc are called odd numbers, while students who get numbers 2,4,6..dsr are called even numbers.

The first rule is, the teacher will mention the number whether it is odd/even, if the student who gets an odd number then he will mention the number followed by the friend next to him. If there are students who do not focus/wrong numbers, they must come to the front of the class to be challenged. The challenge is that students have to answer the questions in the book related to the "Passive Voice" material.

In this case, the researcher provides an interesting learning strategy, in accordance with the Pedagogical Content Knowledge aspect, the teacher

has sufficient knowledge of the material being taught balanced with interesting learning strategies so as to make the learning process in the classroom effective.

At the end of the lesson, the teacher gives assignments to students regarding the material that has been studied. And ask students to submit the assignment via Google Classroom.

**b. Teacher C**

Based on observations made by researcher on February 19, 2022, as follows:

Before starting the lesson, the teacher checks the students' attendance first. After that, the teacher and students read a prayer together before starting the lesson. Before starting the lesson, the teacher reviews the material that has been studied in order to provide stimulation to students so that they still remember the material they have learned at the last meeting.

At this meeting the teacher provides material on "Simple Present Tense". The teacher explains the material very well, the explanations are straightforward and easy to understand for students on the blackboard. After giving the material, the teacher held a game, namely throwing paper balls. The ball will be thrown to the students according to the music turned on by the teacher. If the music stops on one of the students, then the student will have a challenge, namely making simple present tense sentences. Teachers use speakers as a means of technology to support the learning process. It is related in Technological Aspect, and support by questionnaire data:

*“Biasanya saya menggunakan rekaman suara (record), tapi record digunakan pada saat online learning. Kalau untuk tatap muka menggunakan speaker..”*

“Usually I use voice recordings (records), but records are used during online learning. For face to face, I use speakers....” (EFL 1)

It is also support by based on the questionnaire data, it is related to the Technological Pedagogical Knowledge aspect:

*“Tentu saja efektif karena pembelajaran menggunakan teknologi/media membuat siswa lebih paham dalam memahami materi pembelajaran. Karena Bahasa Inggris bukan Bahasa ibu mereka, jika hanya menggunakan metode ceramah akan membuat siswa cepat bosan.”*

“Of course, it is effective because learning using technology/media makes students understand better in understanding the learning material. Because English is not their mother tongue, if they only use the lecture method, students will get bored quickly.” (EFL 1)

In this case, the researcher found an interesting teaching strategy where the teacher gave the material and then balanced it with a game. In terms of the Pedagogical Content Knowledge aspect, the teacher has interesting teaching strategies according to the material being taught.

Teachers not only master the material to be taught but also choose strategies that are suitable for students according to their grade level. Because the class taught by the teacher in this meeting is grade 7, where the students still tend to be children, so, the teacher gives games that are appropriate for their age. Based on the interview, it is also related in Technological Content Knowledge, and the data as follow:

*“Menyesuaikan dengan materi pembelajarannya, misal materi “Adjective”, kita bisa menggunakan flashcard untuk belajar mengenai adjective untuk mengkategorikan mana yang “adjective, noun, verb.”*

“According to the learning material, for example “Adjective, we can use flashcards to learn about adjectives to categorize which ones are “adjective, noun, verb.” (EFL 1)

The interaction of teachers and students in the classroom is active and fun, where students feel enthusiastic and enthusiastic in learning. It is related to the application of the TPACK concept in the classroom, which is supported by data from interviews:

*“.....Kalau pembelajaran tatap muka, siswa sangat senang dengan adanya penggunaan teknologi dan media.”*

“In face-to-face learning, students are very happy with the use of technology and media.” (EFL 1)

At the end of the lesson, the teacher gives assignments regarding the material that has been studied to students to do the assignments that the teacher has given through Google classroom. And the teacher gives an evaluation of the student through Google Classroom.

### **c. Teacher D**

Based on observations made by researcher on February 23, 2022, as follows:

Before starting the lesson, the teacher checks student attendance first through class attendance. After that, read the prayer together before starting the lesson. The teacher reviews the material that has been studied at the previous meeting and asks students to explain the main points of the previous material. The point is that students have sufficient knowledge so that they will not forget the material that has been studied.

In this meeting, the teacher continues the next material, namely the "Comparative" material. Also, the teacher gave some examples of sentences using "Comparative". In the view of the researcher, the teacher has a fairly good mastery of the material, where the teacher gives a clear and detailed explanation.

Then the teacher gives an exercise in class, namely categorizing "Positive, Comparative and Superlative" based on the example sentences given by the teacher. Students seem active in class, they look enthusiastic in learning. There is one male student with the initials N, he is very active and likes to ask questions if he feels he doesn't understand. Indeed, these students have an interest in learning English.

Before closing the lesson, the teacher asked the student representatives to read the dialogue text in front of the class. And the teacher gives applause to students who have read.



## **B. Discussion**

The aim of this part is used to answer the first research question which is about teacher's understanding of Technological Pedagogical Content Knowledge (TPACK) by using questionnaire. The researcher then divided the result of the questionnaire based on the aspects of TPACK which has 7 aspects which is mentioned below:

### **1. The English Teachers Understanding of the TPACK Concept at Junior High School**

#### a) Technological Knowledge

The first aspect knowledge is, Technological Knowledge (TK), it refers to teacher's understanding of how to use various technologies. Technological Knowledge is knowledge of how to use technology tools (Nazari et al., Cogent Education (2019). Based on the data in findings from 5 teachers of English shows that 5 teachers got percentages of 81,6%. It means that the teacher's understanding of the understanding of Technological Knowledge (TK) based on the Likert score is at the "Excellent" level.

#### b) Content Knowledge

Content Knowledge (CK) is knowledge about the content or subject matter that must be learned by the teacher and taught to students. The result of 5 teachers of English on understanding in Content Knowledge (CK) from the questionnaire showed that 84%. So, it could be classified that students' level related to content knowledge (CK) is "Excellent".

c) Pedagogical Knowledge

Pedagogical knowledge (TPK) is teacher's knowledge of theory and practice in planning, process, and evaluation learning. From 5 teachers of English in level "Good" English class regarding understanding in Pedagogical Knowledge (PK) from the questionnaire showed that 80%. It showed that the teacher's understanding based on the Likert scale was in the "Good" level in terms of understanding Pedagogical Knowledge (PK)

d) Pedagogical Content Knowledge

Pedagogical content knowledge (PCK) is pedagogical knowledge that related to certain content (Shulman, 1986). Based on data taken from 5 respondents of English teachers, the percentage in understanding about Pedagogical Content Knowledge (PCK) is 80%. It can be inferred that the teacher's understanding of Pedagogical Content Knowledge (PCK) based on the Likert scale is in the "Good" level.

e) Technological Content Knowledge

Technological Content Knowledge (TCK), refer to teachers' understanding of how using certain technologies can help the students understands and practices concepts within a specific content area. Teachers' understanding of Technological Content Knowledge (TCK) based on the results of the questionnaire is in the percentage of 80%. It means it can be ascertained to be in the "Good" level in terms of Technological Content Knowledge (TCK).

f) Technological Pedagogical Knowledge

Technological Pedagogical Knowledge (TPK) is knowledge about various technologies can used to facilitate learning and learning. The result of teacher's understanding of Technological Pedagogical Knowledge (TPK) from the questionnaire showed that 76%. From this 76% can be categorized that their level in understanding technological pedagogical knowledge (TPK) is "Good".

g) Technological Pedagogical Content Knowledge

The last aspect is Technological Pedagogical Content Knowledge (TPCK), is teacher's knowledge of use the appropriate technology in the pedagogical suitable for teaching a content well. Based on the data from the questionnaire, English teachers showed 72%. Based on the Likert scale, it shows that the teacher's understanding of the Technological Pedagogical Content Knowledge aspect is at the "Good" level.

Based on the results obtained by the researchers through the questionnaire, the researchers tried to interpret the results of all the answers that the English teacher had answered regarding their understanding of the 7 aspects of Technological Pedagogical Content Knowledge (TPACK) through the formula contained in Chapter III. From the results of this formula, it can be obtained that the teachers understanding of the TPACK concept at junior high school got a percentage result of 79.8 (80%) with predicate based on the Likert scale being in the "Good" category.

## **2. The Implementation of the TPACK Concept on English Teacher Competence in English Teaching at Junior High School.**

Based on the data obtained through interviews and observations related to the first aspect, namely Technological Knowledge (TK), from the interview data they generally use various kinds of technology to support the learning process such as: google classroom, youtube, Kahoot! and computers. The technology that is quite often used is E-Learning. E-Learning is an application issued by the Ministry of Religion for teachers and students under the auspices of the Ministry of Religion. Technological Knowledge is teacher knowledge about technology, software, and applications used to support the learning process (Sintawati & Indriani, 2019). In this case, teachers do not only master traditional technology but new technologies that continue to develop over time.

This data is also supported by the results of observations made by researchers, where researchers directly observe how teachers apply the TPACK concept in the classroom. From the results of these data, generally teachers also use technology standards in the classroom such as using a blackboard and in terms of modern technology, namely Zoom, WhatsApp, Google Classroom, and one of them is the use of speakers. The use of speakers aims to teach listening skills to students. Listening is complex in a second language, because students deal with grammatical patterns, pronunciation, and different accents. Students have to analyze all this factors when they receive input. This makes input the key factors in listening, input that provides new vocabulary, grammatical and

phonological items to permit the students to move from one level to another. So, Technological Knowledge is teacher knowledge about standard technologies such as: books, white board, chalk, eraser and modern technology (Mishra, 2006).

In the application of technology, it does not always run smoothly. Sometimes there are obstacles when using technology in learning. As in interview Q.8, EFL 1/2/3/4/5 stated there were several obstacles such as: application errors, blackouts, damaged speakers, lack of LCD projector facilities and most often network constraints.

In the aspect of Content Knowledge (CK), the teacher has a fairly good mastery of the material for learning English. Content knowledge (CK) is teachers' knowledge about the subject matter to be learned or taught (Mishra, 2006). As a teacher they should be able to master the material that will be taught. Researchers see, English teachers generally have mandatory books that have been provided by the school. and they also add material from other sources such as youtube, the internet and even one English teacher still keeps books when he is in college, that book is one of the supporters in mastering teacher material.

Based on the observations made by the researchers, the teacher must also provide critical answers to students if there are students who do not understand the material taught by the teacher. This relates to the Content Knowledge aspect, where the teacher must master the material he teaches. In this case, teachers must also know and understand the material they teach, including knowledge of the explanatory framework that organizes and relates

ideas (Shulman, 1986). With this, the researchers revealed that teachers have good professional competence. Professional competence is an ability related to mastery broad and in-depth learning material in the field of study, which includes mastery of the substance of the curriculum content of subjects in school and the scientific substance that overshadows the curriculum material, as well as increasing scientific insight as a teacher

From the data obtained, English teachers use various teaching methods, as in the findings in Q.3, EFL1/2/3/4/5 has a variety of different teaching methods. Especially in teaching speaking skills, such as roleplay, flashcard, guess picture etc. In this aspect it relates to Pedagogical Knowledge (PK), teachers' deep knowledge about the processes and practices or methods of teaching and learning.

In the findings, based on the data obtained through observation, the researcher found various kinds of activities carried out by the English teacher in the class such as: 'Odd/Even' games, and also throwing paper balls. This is related to the Pedagogical Content Knowledge (PCK) aspect. Pedagogical Content Knowledge (PCK) is consistent with and similar to Shulman's (1986) idea of knowledge of pedagogy that is applicable to teaching specific content. In this aspect, the researchers found that the teacher provided interesting learning strategies, according to the Pedagogical Content Knowledge aspect, the teacher had sufficient knowledge of the material being taught balanced with interesting learning strategies so as to make the classroom learning process effective.

They encompass, among other factors, overall educational purposes, values, and aim (Mishra, 2006). Teachers who have a deep art of teaching can understand how to teach in a fun method and develop positive thoughts about learning. In pedagogical knowledge requires an understanding of cognitive, social, and learning development theories and how they apply to students in the classroom. With this, the researcher revealed that teachers have good pedagogic competence. Pedagogic competence is technical ability in carrying out duties as educators, teachers, and mentors. In addition, in these competencies, a teacher mastering learning strategy for students and educational learning principles,

In the findings of Technological Content Knowledge (TCK) and Technological Pedagogical Knowledge (TPK), it can be concluded that the teacher divides students into several groups to look for material that has been assigned by the teacher. Students are given the freedom to search for the material, whether from the Internet, YouTube or various other learning applications. In addition, teachers use the Google Classroom application as a means to collect student assignments. It means that in the TPK aspect, teachers can use technology based tasks that enable students to engage in learning and also uses technology to interact and collaborate with students in different teaching and learning.

The researchers found that teachers have a variety of technologies that can support learning materials. For example, the teacher uses the “Tenses” application, the application is used when the teacher wants to teach tenses such as: Simple present tense, past tense, etc. to students. So in this case, related to

the aspect of Technological Content Knowledge (TCK), teachers have the ability to learn the latest technology to support the learning process in the classroom. (TCK) is defined as knowledge about technology and content are related. Teachers need to know not only the subject matter they teach material can be changed with the application of technology (Mishra, 2006).

This is the last discussion, also to answer RQ number two regarding the implementation of the TPACK concept on English teacher competence in English teaching. From the data obtained by researchers, teachers can teach using appropriate technology based on the material being taught and apply learning strategies and use different technologies in learning practices. When teachers use technology in learning, students respond very happy, they are enthusiastic and more active in learning. and this, it is very important to apply the TPACK concept in learning, because it can be a student more active in learning. With this, the researchers revealed that teachers have good social competence. Social competence relates to the ability of educators as part of the community to communicate and interact effectively with students. However, almost all English teachers stated that they needed a laboratory language that could support the learning process in English teaching. In their experience, teachers cannot use the Language Lab facilities properly because the headset to be used is damaged. Therefore, they cannot use these facilities to the fullest. Technology Pedagogical content knowledge refers to teachers' knowledge to integrate technology into their teaching in any content area especially in English teaching. Teachers have an understanding of the three basic components of



knowledge (CK, PK, TK) by teaching content using appropriate pedagogical methods and technologies.