

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

The last chapter will cover three points; conclusions of the study, implication and suggestion.

5.1 Conclusions

Based on the data that have been presented in Chapter 4, we can make judgments about the extent to which the findings have answered the research question as given in Chapter 1. It is then presently suitable for drawing conclusion as the following:

1. All the aspect of TPACK categorized in the high category or good. It indicates that the ability of the lecturers' understanding related to the technology is quite high and the ability of the lecturer in applying or integrating technology is in the good category when viewed from the results of data processing using SPSS. The mean score of all indicators are bigger than 4.00. The participants in this study reported greater averages in Content Knowledge (CK) and Technological Pedagogical Knowledge (TPK).
2. The finding of the lecturers' competences were divided into three sections. The lecturers had high or good ability in planning and preparing the lesson. In addition, the most dominant indicator of competence in terms of conducting learning process was beginning of online learning. It can be stated that a half of lecturers admitted that they always convey

learning objective to the students before conducting effective online learning. In terms of learning evaluation, the most dominant indicator of competence was among three different indicators in learning evaluation section was applying the feedback. It means that almost a half of lecturers admitted that they always applying the feedback dominantly as learning evaluation in the indicator of relying on the result of evaluation to identify lecturer's potential and challenges in improving lecturers' professionalism.

3. The result shows that component of Content Knowledge (CK) is direct predictor of the individual interrelationships resulting in Technological Content Knowledge (TCK) and also predict TPACK. The lecturers' level of Content Knowledge (CK) impact on the lecturers' Technological Content Knowledge (TCK) in online teaching and learning
4. Technological Knowledge (TK) was significant predictor of TPACK. The lecturers' level of Technological Knowledge (TK) impact on the lecturers' Technological Content Knowledge (TCK) in online teaching and learning. The result also showed that technology played essential roles in teaching and learning process during the pandemic to prevent the spread of virus in educational institutions.
5. From the statistical results, Technology Knowledge (TK) significantly affects Technology Pedagogy Knowledge (TPK). It indicates that the variable of Technology Knowledge (TK) affects positively to Technology Pedagogy Knowledge (TPK). This finding supports research related to

Technology Knowledge (TK) affected positively towards Technology Pedagogy Knowledge (TPK) that stated the educators need to train to use recent technology.

6. The variable of Pedagogical Knowledge (PK) affects positively to Technological Pedagogical Knowledge (TPK) on online teaching and learning. The lecturers' level of Pedagogical Knowledge (PK) impact on the lecturers' Technological Pedagogical Knowledge (TPK) in online teaching and learning.
7. Technological Content Knowledge (TCK) was significant predictor of Technological Pedagogical Content Knowledge (TPACK). The lecturers' level of Technological Content Knowledge (TCK) impact on the lecturers' Technological Pedagogical Content Knowledge (TPACK) in online teaching and learning.
8. There is positive correlation between the Technological Pedagogical Knowledge (TPK) toward Technological Pedagogical Content Knowledge (TPACK). The lecturers' level of Technological Pedagogical Knowledge (TPK) impact on the lecturers' Technological Pedagogical Content Knowledge (TPACK) in online teaching and learning.
9. This study showed that the relationships of all TPACK components were complex involving some significant hypotheses. All the components of TPACK impact on TPACK in online teaching and learning. There are significant relationships exist among TPACK components. However, in

correlation with the lecturers' competence on online teaching and learning, the level of TPACK possessed by lecturers in the learning process do not directly affect the competence by the lecturers, in this case, the lecturers' planning and preparing session, conducting learning process, and learning evaluation.

10. Statistically, in term of age, P value or level of significant of all TPACK's variables are bigger than 0.05. In the same way, the level of significant level of competence variables such as planning and preparing, conducting learning process, and learning evaluation are bigger than 0.05. It indicates that there is no significant difference of Technological Pedagogical Content Knowledge (TPACK) level and lecturers' competence in term of age.
11. There is significant difference of conducting learning process section and learning evaluation section in term of gender. In conducting learning process, there were significant differences in scores for females reported significantly higher scores of conducting learning process than that of males. In learning evaluation, there were significant differences in scores for females having higher scores of learning evaluation than that of males. The significant differences are found in conducting active and effective learning process section in which P value are smaller than 0.05.
12. Statistically, in term of teaching experience, P value or level of significant of all TPACK's variables are bigger than 0.05. In line with TPACK variables, the level of significant level of competence variables such as

planning and preparing, conducting learning process, and learning evaluation are bigger than 0.05. It indicates that there is no significant difference of Technological Pedagogical Content Knowledge (TPACK) level and lecturers' competence in term of teaching experience.

13. In term of level of education, participants were divided into three groups according to their level of education (Bachelor Degree; Master Degree and Doctoral Degree). It was reported that there were significant differences of scale scores of Technological Knowledge (TK), Pedagogical Knowledge (PK), Technological Content Knowledge (TCK) and Technological Pedagogical Knowledge (TPK) from respondents based on their level of education.

5.2 Implication

This dissertation has both theoretical and practical implications. Theoretically, this dissertation lends support to the idea that lecturers must improve their technological expertise as well as their competence, according to the TPACK conceptual framework. In essential for learners to learn successfully and efficiently, lecturers must be capable of delivering a subject through relevant technology and techniques. By surveying accomplished lecturers, the researcher was able to look for variability in the knowledge base of educators, namely TPACK and competence.

In TPACK, one of the many parts of PCK has been extracted and insights gained through a three-part framework. This may be useful in other areas of research related to pedagogical content knowledge, such as literacy or assessment. These findings also contribute to the ongoing exploration of the boundaries of the TPACK conceptual framework. While supporting the distinction between technological knowledge (TK) and the knowledge of how to use technology to support student learning (TPACK), the exploratory factor analysis, correlations, and distributions also raise questions about whether educators make a distinction between TPACK, PCK, TPK, and TCK in their practice.

Furthermore, lecturers must merge their teaching and technology so that they can keep up with the learners' need and the broad community. Then it is hoped that by utilizing technology, learners will be able to learn faster and lecturers will be able to teach more effectively. Eventually, the learning goal would be easier to achieve. Understanding the relationships between TCK, TPK, PCK, and TPACK can help educators assess the practical significance of these theoretical differences, especially if existing course components need to be further broken down to expound these different types of competencies. Or, some integrative efforts can be made for enhancing TPACK.

As one considers the impact that technology has had on society as a whole, one might also question these changes as they pertain to the teaching and learning environment. The transformative nature of educational technologies has profoundly changed pedagogical thinking and looks to revolutionize our educational system and the instructional technology choices that educators make.

Integration of technology is a complex process. However, integration is not simply about the technology choice itself, but rather, the innovative ways in which they use the technology. In order for true integration to occur, one must make careful technological choices in light of pedagogical goals and options. Educators are encouraged to look at technology as a tool used to assemble new ideas, in new ways, providing innovative approaches to old problems.

5.3 Suggestions

This section presents some suggestions offered on the basis of the findings in the present study. The suggestions are as follows:

1. Even though the respondents have shown great competences in particular indicators, the lecturers still have to improve their knowledge about TPACK and their competences. In line with this, it would be better if the related authorities conduct a regular monitoring toward the lecturers. It is expected that the lecturers will keep updating their level of TPACK and their competences.
2. The study employs a small number of participants, only 117 lecturers from several private colleges in Jambi. It is recommended that a future study will involve all lecturers in a large number of subjects.
3. In this study the writer only used questionnaire as technique to obtain the data because in fact there were some obstacles to use the observation technique in this study due to high level of Covid-19 pandemic case in Jambi and also the publicactivity restrctions

(PPKM). Most of lecturers refused to be observed because of this condition. Therefore, it is recommended for the future study will use observation and also interview to get the authentic data of lecturers' TPACK and competences.