

CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

Classical Test Theory (CTT) and Item Response Theory (IRT) are known for their roles as the most common item analysis approach theories and are often used by teachers/researchers. CTT and IRT are the two leading and most widely used theories in item analysis. Therefore, CTT and IRT play an important role in item analysis. CTT is dependent on test-takers (students) so that the results of item analysis using CTT are inconsistent, very easily influenced by the ability of test-takers (students). The indicators used in the CTT generally are validity, reliability, level of difficulty, discriminatory power, and effectiveness of distractors (specifically multiple-choice tests). From these indicators, we can see the dependence. This is in contrast to the independent IRT. The indicators used in IRT are validity, reliability, parameter a (discrimination power), parameter b (level of difficulty), and parameter c (pseudo guessing). From these indicators, we can see that the results of item analysis using IRT are more consistent.

We know that in the articles on item analysis to determine the quality of the mathematics tests researched: 8 out of 10 articles use indicators of validity, reliability, level of difficulty, and discrimination power; 7 out of 10 articles used descriptive quantitative methods; all articles directly tell about the test form used except article 7 (A7) and article 8 (A8), mostly in the multiple-choice test; the number of samples taken affects the implementation of each theory, where IRT uses a larger sample than the sample used in the CTT; and only 1 in 10 articles provides an overall test quality conclusion, namely article 10 (A10).

CTT is the oldest approach theory but is still popular and used today. Each of these theoretical approaches has a different point of view and influence on the results of research. Both have their advantages and disadvantages. CTT is simpler, easier to understand and to do, but the results of the analysis are very dependent on the ability of the test taker. Meanwhile, IRT does not depend on the ability of the test taker but is more complex and difficult to understand and to do.

5.2 Suggestion

To improve the quality of the test, it is very important to pay attention to the theoretical approach used to analyze the items. In addition, further media/application/software development can facilitate item analysis. Moreover, if teachers are given training in item analysis to improve their knowledge and skills in analyzing items.

