CHAPTER 4
RESULT AND INTERPRETATION

CHAPTER-IV RESULTS AND INTERPRETATION

4.1.0 Measurement of mean scores by Paired samples t-test to obtain the relationship between Intervention with ICT Pedagogical tool and improvement in achievement scores.

The p-value[3] is .0001 which is less than 0.05 (typically ≤ 0.05) is statistically significant. It indicates strong evidence against the null hypothesis, as there is less than a 5% probability the null is correct (and the results are random). Therefore, null hypothesis is rejected, and alternative hypothesis is accepted.

A lower p-value is sometimes interpreted as meaning there is a stronger relationship between two variables. However, statistical significance means that it is unlikely that the null hypothesis is true (less than 5%).

To understand the strength of the difference between two groups (control vs. experimental) the effect size was calculated.

4.1.1 Magnitude of the relationship Effect size is a quantitative measure of the magnitude of the experimental effect. The larger the effect size the stronger the relationship between two variables.

Cohen's d is the appropriate effect size measure if two groups have similar standard deviations and are of the same size.

Cohen suggested that $d = 0.2$ be considered a 'small' effect size, 0.5 represents a 'medium' effect size and 0.8 a 'large' effect size.

---

[3] A p-value, or probability value, is a number describing how likely it is that your data would have occurred by random chance (i.e. that the null hypothesis is true).
The level of statistical significance is often expressed as a p-value between 0 and 1.

This means that if the difference between two groups' means is 0.6 standard deviations, the difference is large which means that when the group was treated with *the **ICT Pedagogical tools causes a large effect on the achievement scores of the students.***

4.2.0 Relationship between Interest and ICT pedagogical tools:

The above data analysis interprets that teaching-learning through ICT has been fun for the students. The maximum 'YES' responses suggests more interest in the subject. From the data provided in Table 3 about student's interest of learning with ICT pedagogical tools in shows that most students are aware of the goodness and usefulness of ICT pedagogical tool. Most students realized that the use of ICT helps them to improve learning with more updated materials. It is undeniable that they look forward to biology lessons when it is ICT integrated and enjoy them a lot.

Besides, most students agreed that the use of ICT will definitely provide lots of opportunities for an effective learning as well as ICT supported teaching makes learning more effective .This situation shows that students view the use of ICT in teaching and learning process as something positive where ICT is the aid needed by teachers to ensure the effectiveness of both teaching and learning process. Next, from the data obtained, it also shows that the use of ICT in teaching enable the students to be more active and engaging in the lesson prepared by the teachers. This is because students are familiar with ICT and they find it easier learning by ICT and allows them to be engage more in the lesson.

The result shows that the effectiveness of ICT for students in learning are learning Biology through ICT also aids in enhancing knowledge and skills in

computer technology and how to use them in instructional process in a
classroom.