



## Information and Communication Technology (ICT) Through PowerPoint Presentation: A Tool in Enhancing Teaching-Learning Process

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### Abstract

The study determined the performance levels in analytic geometry, physics, and statistics of students who had used Information and Communication Technology (ICT) through PowerPoint presentation (PPT) as a tool in enhancing the teaching-learning process. The study also compared the performance levels in analytic geometry, physics, and statistics when students were grouped according to sex and according to the type of learning process used. Results of the study showed performance levels in analytic geometry, Physics, and Statistics of both males and females were satisfactory. Higher performance levels in mathematics problem solving aspect, Statistics concept, and Statistics overall were observed for students who used ICT in their learning process compared to students using the conventional method of teaching. In Physics, performance levels in the concept aspect, the problem solving aspect, and overall performance were all satisfactory regardless of the learning method used. Further research is suggested to verify the results of the study.

### KEYWORDS

Information and Communication Technology (ICT)  
ICT instruction  
PowerPoint presentation  
Physics Performance  
Statistics Performance  
Analytic Geometry Performance

### Introduction

Various educational tools became learning aids for teachers to help their students in an effective way. ICT, when effectively planned and used, can enhance the teaching-learning process. According to Newton and Rogers (2003), new technologies may also help to increase student motivation and to develop interpretation skills with the data. Also, Corbeil (2007) found out in his research that students exposed to ICT through the use of PPT presentations preferred them over textbook presentations.

Since every learner acquires skills and

knowledge in different ways, teachers rely on varied tools to explain concepts and competencies in an effective way. Due to technological advancement, ICT, through the use of PowerPoint presentations, became one of the common tools in the teaching-learning process. Although ICT use had been a part of the curriculum for some time, its use on technical subjects was not that explored. It is commonly used in subjects that need picture or motion portrayal but not that much on problem solving.

ICT educational tools like PowerPoint presentation became part of many instructional settings and an alternative tool for learning,

particularly in large classes and in courses more geared toward information exchange. It allows teachers to explain abstract concepts while accommodating all learning styles. Used properly, PowerPoint can be one of the most powerful tools for disseminating information; employed inappropriately, PowerPoint could potentially confuse students and make learning a difficult process. Furthermore, PowerPoint presentation may disengage students when lecturers simply read the slides and do not input further on the content being discussed. It is in this concept that this study was formulated.

It was hoped that this study would show the technology's effect on student performance hence assisting the teachers in designing effective methodologies and assessment tools that improve student performance in Statistics, Analytic Geometry, and Physics. The result of the study will provide relevant information to help the faculty members teaching these subjects to select appropriate strategies, methodologies, and the type of instructional materials to use. Learning would be an active process when available information is accessible to the teachers. The information from the study would orient teachers as to what set of a scene would arouse students' intellect. It is also hoped that the study will contribute to the research literature in the field of education in general and the improvement of Statistics, Analytic Geometry, and Physics instruction in particular.

### **Use of ICT Tools in Teaching-Learning Process**

Several studies showed that the use of technology in schools had developed new ways in the teaching-learning process. Some studies showed positive effects of using ICT, but some showed otherwise.

ICT educational tools revealed positive effects on the learning process of students. According to Stepp-Greany (2002), students perceived that some of the benefits of the use of technology in classrooms were increased motivation, improvement in self-concept, mastery of basic skills, more student-centered learning, and engagement in the learning process.

According to Bartsch and Cobern (2003), various colleges and universities have rooms

equipped with the technology necessary for any instructor to display information via PowerPoint presentations. They also emphasized in their study that students believed that they learned more from PowerPoint lectures. A study has also shown that students like to be taught using PowerPoint presentations (Graig & Amernic, 2006).

Fedisson and Braidic (2009) did a study on the impact of using ICT through PowerPoint presentations on student achievement and student attitudes. Result of the study showed that student test grades increased when using PowerPoint as teaching tools, especially for low-achieving students or for those with learning disabilities. A similar study was conducted in the second year and same result were observed where students performance was higher with the use of PowerPoint presentations.

Ozaslan and Maden (2013) found that students learned better if the course material was presented through some visual tools. They also found out that teachers perceived that PowerPoint presentations made the content more appealing, thus, increased the motivation of students. In the study of Szabo and Hastings (2000), result showed that students had positive attitudes toward PowerPoint lectures because they felt that use of ICT through PowerPoint lectures were interesting, able to get their attention and help them to have a better understanding. However, both lecture styles had no significant differences in the students' test results.

In terms of student performance, Savoy et al. (2009) concluded that the use of PowerPoint presentations and traditional teaching had no significant difference in terms of the performance of students in numerical concepts. They found out that the use of PowerPoint presentation in teaching numeric concepts tends to be faster and clearer than writing. However, it does not necessarily improve the performance and retention of learners.

Pros et al. (2013) researched the effects of the PowerPoint methodology on content learning. This study focused on whether the use of PowerPoint technology as the main resource to convey information affects students' learning compared with classes taught without this technology. The sample consisted of 205 psychology students, divided into four groups,



who were taught an ordinary educational psychology lesson. In two of these groups, a PowerPoint presentation (19 slides) was used to deliver the contents, while in the other two, the professors delivered the same contents with the aid of only the blackboard. After the lesson, students' learning was assessed through a questionnaire consisting of ten multiple-choice items. Results showed significant differences with the scores of the groups without PowerPoint, an average of 19% higher than the groups with PowerPoint.

According to Lowry (1999), one of the main features of PowerPoint is it makes it easier for lecturers to present clear summaries. Also, Hlynka and Mason (1998) concluded that PowerPoint provides structure to a presentation; thus, it aids in the order and pacing of the lecture. Lastly, Mantei (2000) suggested that accompanying lectures with PowerPoint is a more efficient time management strategy than writing on whiteboard or using transparencies. As less class time is spent writing on the board or changing transparencies, thus the lecture may flow better.

Despite the effectiveness of PowerPoint presentations to both teachers and students, they are one of the most easily misused teaching aids (Priya, 2012). Creed (1997) argued about PowerPoint in several points: first, "you may get less feedback from the class because your eyes and theirs are on the screen rather than looking at each other;" second, students don't have a chance to synthesize what they've heard; and third, the emphasis is on the quality of your presentation rather than your students' learning.

Balmeo et al. (2014) did a study that focused on the integration of technologies in the educational environments where students with special learning needs are housed at the SPED Schools in Baguio City. It determined the technology availability, technology effectiveness in the classroom, and problems encountered in technology integration. Result of the study showed that the availability and effectiveness levels of technology were limited.

Bay (2013) examined in Lyceum of the Philippines University-Batangas the technology-driven teaching strategies used in the photojournalism course. Specifically, it determined the frequency of use, the effectiveness, and

the problems encountered by the students during the execution of the strategies used. The results showed that the effectiveness of the technology-driven teaching strategies depends on how frequently they are used in the class, and effectiveness is not affected by the problems encountered during the entire course.

Teofilo et al. (2012) studied the effect of blended learning on academic performance on problem solving and programming of Bachelor of Science in Information Technology students. They found that students who took up the course using the blended mode performed significantly better than those who were in the face-to-face mode only. The respondents also identified that accessible practice cases and lecture notes that can be downloaded and viewed whenever needed are the most beneficial among others when using the Claroline eLearning system used for the online part of the blended mode. However, the respondents who had undergone the blended learning mode identified the unavailability of the Claroline, which made the necessary class documents not accessible, as the number one problem.

Enriquez (2014) did a study on students' perceptions of the effectiveness of the use of Edmodo as a supplementary tool for learning social science courses. The findings affirmed that the majority of participants considered Edmodo as an effective supplementary tool for their learning.

Lari (2014) determined the impact of using PowerPoint presentations on students' learning and motivation in the secondary school English process. The subjects were split into two groups (Experimental and Control). Each group was taught differently, one using technology like video-projector, PowerPoint in class, and the other through a traditional method such as the use of textbooks. Result showed teaching based on the use of technology had a significant positive effect on learners' scores. Analyses showed that the experimental group learners performed better than the control group.

In addition, sex may also impact the performance of students. Deepak et al. (2011) found that female students outperformed male students. Also, Hedjazi and Omidi (2008) concluded that female students had better

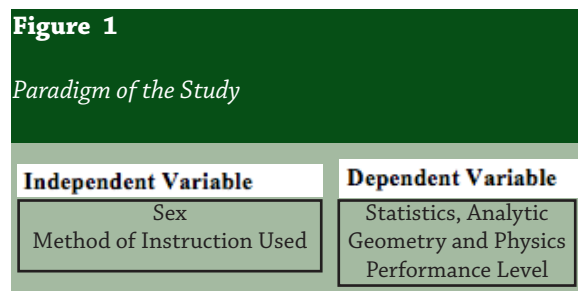


academic performance than their counterparts. On the other hand, Lipe (1989) suggested that there was no significant difference in the performance of male and female students.

The focus of the study is to compare the performance of students taught Statistics, Analytic Geometry, and Physics concepts with the use of ICT as a tool in the teaching-learning process through PowerPoint presentations and students using the conventional method. Specifically, it aims <sup>(1)</sup>to determine the performance level in Statistics, Analytic Geometry and Physics subjects of students who underwent learning using ICT through the use of PowerPoint presentations when students are grouped according to sex; <sup>(2)</sup>to determine the performance level in Statistics, Analytic Geometry, and Physics subjects of students without the use of ICT through PowerPoint presentation as a tool in the teaching-learning process when students are grouped according to sex; <sup>(3)</sup>to compare the Statistics, Analytic Geometry, and Physics subjects performance level of male students when grouped according to method of instruction used; <sup>(4)</sup>to compare the Statistics, Analytic Geometry, and Physics subjects performance level of female students when grouped according method of instruction used; and, <sup>(5)</sup>to compare the overall performance level in Statistics, Analytic Geometry and Physics subjects of students when grouped according to method of instruction used.

### Conceptual Framework

The goal of the study is to know the effect of using ICT through Powerpoint Presentation as a tool in the teaching-learning process of students in Statistics, Analytic Geometry, and Physics subjects. The paradigm (Figure 1) shows the direction of the study:



The dependent variables are the students' performances in physics, Analytic Geometry and statistics along concept, problem solving and over-all aspects. The study compared the performance levels in Statistics, Analytic Geometry, and Physics of students learning with the use of PowerPoint presentation and those learning under the conventional method of instruction (use of chalk and board method or textbook and handout). The study also determined the performance levels in the same subjects when students are grouped according to sex.

## Methodology

### Respondents and Place of Study

The respondents of the study were selected students enrolled in selected Statistics, Physics, and Analytic Geometry subjects during the second semester of the school year 2016-2017 at Benguet State University, La Trinidad, Benguet. The researchers utilized complete enumeration in each class. Specifically, 83 Bachelor of Science in Agricultural Business students were respondents for Physics, 55 Bachelor in Public Administration students were respondents for Statistics, and 92 Bachelor of Elementary Education students were respondents for Analytic Geometry subject.

### Research Method

The study used a quasi-experimental design where two groups of students were chosen as respondents of the study. Also, causal quantitative research design was utilized to determine the effect of the use of ICT instruction through PowerPoint presentation on the learning process of students.

### Instrumentation

Two groups of students were taught Physics concepts on mechanics, Analytic Geometry concepts on rectangular coordinate system, line and circle equations, and Statistics concepts on data presentation and measures of central tendency. The first group was taught solely using ICT instruction through PowerPoint presentations, while the other group was taught the same concepts





using the conventional method of instruction. To avoid teacher factor, two classes under each researcher, of the same year level, and same course and subject were utilized. Teacher-made exams were given to the students before the conduct of the study to randomize the proper distribution of students according to group. Validity and reliability tests were conducted, and revisions were incorporated into the teacher-made test before using them in the research. Each class was divided into two groups (Experimental or Control group). The same formulated tests were given to the two groups at the end of the subject matter period to measure the corresponding performance. Comparisons of performance for the two groups were done.

### Statistical Analysis

Weighted mean was used to determine the level of performance in Statistics, Analytic Geometry, and Physics of students. T-test for one sample mean was used to determine if the hypothesized performance of students, which is average, is true. Also, t-test for two independent means was used to compare the performances of the students taught using ICT and with the control group as well as to compare performances according to sex.

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## Results and Discussion

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### Level of Performance of Students who Underwent Learning Through the Use of ICT when Grouped According to Sex

Table 1 presents the level of performance of students who used ICT instruction through PowerPoint presentation during the learning process. It was observed that male students who used ICT instruction during the learning process had satisfactory level of performance in most areas along the subjects of Analytic Geometry, Physics, and Statistics. However, male students performed very satisfactorily on the Statistics concept and likewise on the overall performance in Statistics. On the other hand, analysis suggests that female students who learned through the use of PowerPoint presentations had very satisfactory performance under Analytic Geometry concept, Statistics concept, and Statistics overall performance. They, however, had satisfactory

performance in Analytic Geometry problem solving, Physics concept, problem solving and overall Physics performance, and Statistics problem solving component. Also, both male and female students had very satisfactory levels of performance under concept and overall under Statistics subjects. These results suggest that the use of ICT in teaching-learning concepts significantly increases the performance of the said students. This result may be attributed to the fact that with the use ICT, concepts can be explained more by adding pictures and figures.

Lastly, analyses showed that the performance of male and female students significantly differ under Analytic Geometry problem solving. Specifically, male students had fairly satisfactory level of performance while female students had satisfactory level of performance. This result suggests that with the use of ICT, female students had higher level of performance than male students. This finding further suggests that the use of ICT is more effective in female students than in male students under problem solving in Analytic Geometry. This finding corroborates the findings of Deepak et al. (2011), where he suggests that female students outperform male students.

### Level of Performance of Students who Underwent Learning Without the Use of ICT when Grouped According to Sex

Table 2 presents the performance levels in Analytic Geometry, Physics, and Statistics subjects of male and female students who did not use ICT in the learning process. Data showed that male students who did not use ICT during the learning process had satisfactory level of performance in all areas under Analytic Geometry, Physics, and Statistics subjects. On the other hand, female students had higher level of performance than satisfactory under the concept aspects of Analytic Geometry and Physics subjects. Also, female students performed lower than satisfactorily in the Analytic Geometry problem solving part.

Analysis revealed that there were significant differences in the level of performance of male and female students along concept and overall under Analytic Geometry subject. Specifically, female students performed significantly better than male students along the concept and overall areas in Analytic Geometry. Also, there were significant differences in the performance of students



**Table 1***Level of Performance of Students with the Use of ICT through PowerPoint Presentation According to Sex*

Areas/Subject	Sex of Students						
	Male			Female			
	Mean	D.E.	Sig.	Mean	D.E.	Sig.	Sig.
<b>Analytic Geometry</b>							
Concept	81.35	S	0.847 <sup>ns</sup>	84.61	VS	0.014*	0.234 <sup>ns</sup>
Problem Solving	78.82	FS	0.167 <sup>ns</sup>	82.00	S	0.996 <sup>ns</sup>	0.035*
Overall	80.28	S	0.515 <sup>ns</sup>	83.25	S	0.082 <sup>ns</sup>	0.128 <sup>ns</sup>
<b>Physics</b>							
Concept	81.82	S	0.951 <sup>ns</sup>	82.58	S	0.560 <sup>ns</sup>	0.797 <sup>ns</sup>
Problem Solving	80.74	S	0.843 <sup>ns</sup>	81.34	S	0.682 <sup>ns</sup>	0.902 <sup>ns</sup>
Overall	80.83	S	0.735 <sup>ns</sup>	81.46	S	0.644 <sup>ns</sup>	0.857 <sup>ns</sup>
<b>Statistics</b>							
Concept	87.08	VS	0.000**	89.29	VS	0.000**	0.265 <sup>ns</sup>
Problem Solving	86.67	VS	0.115 <sup>ns</sup>	83.01	S	0.400 <sup>ns</sup>	0.189 <sup>ns</sup>
Overall	86.67	VS	0.005**	85.86	VS	0.000**	0.604 <sup>ns</sup>

Legend:

90 and above	Outstanding	AO	** - highly significant at 0.01
85 – 89	Very Satisfactory	VS	* - highly significant at 0.05
80 – 84	Satisfactory	S	ns – not significant
75 – 79	Fairly Satisfactory	FS	
74 and below	Poor	P	

in problem solving in Statistics subject. Male students had very satisfactory performance in problem solving while female students had fairly satisfactory level of performance. This result suggests that male students who did not use ICT instruction through PowerPoint presentations performed better than females in problem solving in Statistics. This result suggests that sex is also a significant factor in the level of performance of students.

#### **Comparison of the Male Students' Performance Level According to the Method of Instruction Used**

Table 3 presents the performance levels in Analytic Geometry, Physics, and Statistics of male students. Analysis reveals no significant differences in the level of performance of male students when compared according to methods used. Specifically, students had the same level

of performance whether they used ICT through PowerPoint presentations during the learning process or did not. This result suggests that male students' performance is not affected by the method used by the teacher.

#### **Comparison of the Female Students' Performance Level According to the Method of Instruction Used**

Table 4 shows the performance level in Analytic Geometry, Physics, and Statistics subjects of female students. Analysis reveals no significant differences in the level of performance of female students in all areas in Physics when compared according to methods used. The same results were noted on the level of performance of students in all areas in Statistics. This result suggests that the use of ICT contribution to the female performance in Statistics in the conceptual, and problem solving aspects, as well as the overall performance



**Table 2***Level of Performance of Students without the Use of ICT through PowerPoint Presentation According to Sex*

Areas/Subject	Sex of Students						
	Male			Female			
	Mean	D.E.	Sig.	Mean	D.E.	Sig.	Sig.
<b>Analytic Geometry</b>							
Concept	75.71	FS	0.080 <sup>ns</sup>	84.38	S	0.048*	0.006**
Problem Solving	78.27	FS	0.185 <sup>ns</sup>	78.80	FS	0.000**	0.807 <sup>ns</sup>
Overall	76.51	FS	0.089 <sup>ns</sup>	81.96	S	0.963 <sup>ns</sup>	0.025*
<b>Physics</b>							
Concept	87.50	VS	0.150 <sup>ns</sup>	84.23	S	0.015*	0.224 <sup>ns</sup>
Problem Solving	84.17	S	0.748 <sup>ns</sup>	81.08	S	0.519 <sup>ns</sup>	0.497 <sup>ns</sup>
Overall	85.00	VS	0.548 <sup>ns</sup>	82.34	S	0.733 <sup>ns</sup>	0.410 <sup>ns</sup>
<b>Statistics</b>							
Concept	84.17	S	0.669 <sup>ns</sup>	85.51	VS	0.061 <sup>ns</sup>	0.776 <sup>ns</sup>
Problem Solving	87.50	VS	0.153 <sup>ns</sup>	78.89	FS	0.069 <sup>ns</sup>	0.046*
Overall	85.98	VS	0.352 <sup>ns</sup>	81.16	S	0.624 <sup>ns</sup>	0.277 <sup>ns</sup>

Legend:

90 and above	Outstanding	AO	** - highly significant at 0.01
85 – 89	Very Satisfactory	VS	* - highly significant at 0.05
80 – 84	Satisfactory	S	ns – not significant
75 – 79	Fairly Satisfactory	FS	
74 and below	Poor	P	

were very satisfactory regardless of the teaching method used. This is likewise observed with the performance level on Analytic Geometry concept and overall where satisfactory level were observed for female students regardless of the method used. On the other hand, significant differences were noted on the level of performance of students in problem solving in Analytic Geometry subjects when compared according to methods used. Specifically, female students who used ICT had higher level of performance as compared to those who used the conventional method.

#### **Comparison of the Students' Level of Performance of According to the Method Used**

Table 5 presents the comparison of the performance level in Analytic Geometry, Physics, and Statistics of students when grouped according to the method of instruction used.

Data showed a satisfactory performance level on most of the areas in Analytic Geometry, Physics, and Statistics subjects regardless of the method used. Such findings confirmed the findings of Savoy et al. (2009) when he concluded that the use of PowerPoint presentations and traditional teaching had no significant difference in terms of the performance of students in numerical concepts. Also, Szabo and Hastings (2000) found out that students had positive attitudes toward PowerPoint lectures because they felt that the use of ICT through PowerPoint lectures were interesting, was able to get their attention, and helped them to have a better understanding. However, it had no significant differences in the test results of students who used the traditional method.

On the other hand, the use of PowerPoint presentations showed most beneficial in the Analytic Geometry problem-solving aspect,



**Table 3**

*Level of Performance of Male Students when Compared according to the Method Used (With or Without ICT Instruction)*

Areas/Subject	Method Used				Sig.
	With ICT		Without ICT		
	Mean	D.E.	Mean	D.E.	
<b>Analytic Geometry</b>					
Concept	81.35	S	75.71	FS	0.229 <sup>ns</sup>
Problem Solving	78.82	FS	78.27	FS	0.868 <sup>ns</sup>
Overall	80.28	S	76.51	FS	0.325 <sup>ns</sup>
<b>Physics</b>					
Concept	81.82	S	87.50	VS	0.218 <sup>ns</sup>
Problem Solving	80.74	S	84.17	S	0.708 <sup>ns</sup>
Overall	80.83	S	85.00	VS	0.507 <sup>ns</sup>
<b>Statistics</b>					
Concept	87.08	VS	84.17	S	0.393 <sup>ns</sup>
Problem Solving	86.67	VS	87.50	VS	0.848 <sup>ns</sup>
Overall	86.87	VS	85.98	VS	0.772 <sup>ns</sup>

Legend:

90 and above	Outstanding	AO	** - highly significant at 0.01
85 – 89	Very Satisfactory	VS	* - highly significant at 0.05
80 – 84	Satisfactory	S	ns – not significant
75 – 79	Fairly Satisfactory	FS	
74 and below	Poor	P	

Statistics concept, and overall performance in Statistics. This result is evident in the higher than satisfactory performance level shown by students who underwent a learning process with ICT instruction. This finding verifies the results of Fedisson and Braidic (2009), who concluded that student test grades increased when PowerPoint is used as teaching tools. Also, Ozaslan and Maden (2013) found that students learned better if the course material was presented through some visual tools such as the PowerPoint presentation.

## Conclusions

Students who used ICT through PowerPoint presentations in the learning process had satisfactory performance level in most areas under Analytic Geometry, Physics, and Statistics.

Male respondents had very satisfactory performance along concepts and overall in Statistics. Also, female students had very satisfactory performance along concepts in Analytic Geometry and concepts and overall in Statistics. Lastly, female students had higher performance in problem solving in Analytic Geometry than male students.

Most students who did not use ICT instruction through PowerPoint presentation had satisfactory performance in most areas in Analytic Geometry, Physics, and Statistics subjects. However, analysis showed that female students who did not use ICT instruction had higher than satisfactory level of performance in Analytic Geometry concepts but fairly satisfactory performance in Analytic Geometry problem solving. Lastly, male students performed better in problem solving in Statistics than female students.





**Table 4**

*Level of Performance of Female Students when Compared according to the Method Used (With or Without ICT Instruction)*

Areas/Subject	Method Used				Sig.
	With ICT		Without ICT		
	Mean	D.E.	Mean	D.E.	
<b>Analytic Geometry</b>					
Concept	84.61	VS	84.38	S	0.885 <sup>ns</sup>
Problem Solving	82.00	S	78.80	FS	0.001 <sup>**</sup>
Overall	83.25	S	81.96	S	0.251 <sup>ns</sup>
<b>Physics</b>					
Concept	82.58	S	84.23	S	0.211 <sup>ns</sup>
Problem Solving	81.34	S	81.08	S	0.901 <sup>ns</sup>
Overall	81.46	S	82.34	S	0.564 <sup>ns</sup>
<b>Statistics</b>					
Concept	89.29	VS	85.51	VS	0.046 <sup>*</sup>
Problem Solving	83.01	S	78.89	FS	0.041 <sup>*</sup>
Overall	85.86	VS	81.16	S	0.011 <sup>*</sup>

**Table 5**

*Level of Performance of Students when Compared according to the Method Used (With or Without ICT Instruction)*

Areas/Subject	Method Used				Sig.
	With ICT		Without ICT		
	Mean	D.E.	Mean	D.E.	
<b>Analytic Geometry</b>					
Concept	84.07	S	83.03	S	0.500 <sup>ns</sup>
Problem Solving	81.48	S	78.71	FS	0.004 <sup>**</sup>
Overall	82.77	S	81.11	S	0.149 <sup>ns</sup>
<b>Physics</b>					
Concept	82.49	S	84.60	S	0.095 <sup>ns</sup>
Problem Solving	81.28	S	81.42	S	0.945 <sup>ns</sup>
Overall	81.39	S	82.64	S	0.399 <sup>ns</sup>
<b>Statistics</b>					
Concept	88.86	VS	85.31	VS	0.032 <sup>*</sup>
Problem Solving	83.73	S	80.16	S	0.058 <sup>ns</sup>
Overall	86.06	VS	81.87	S	0.010 <sup>*</sup>

Legend:

90 and above	Outstanding	AO	** - highly significant at 0.01
85 – 89	Very Satisfactory	VS	* - highly significant at 0.05
80 – 84	Satisfactory	S	ns – not significant
75 – 79	Fairly Satisfactory	FS	
74 and below	Poor	P	



Male students had the same level of performance regardless of the method used. Female students who used ICT instruction performed better in Statistics than those who did not learn through PowerPoint presentations. On the other hand, female students who did not use ICT instruction through PowerPoint presentations performed better in problem solving in Analytic Geometry than those who learned through PowerPoint presentations.

Students have satisfactory performance levels in most of the areas in Analytic Geometry, Physics, and Statistics subjects regardless of the method used. The use of ICT instruction through PowerPoint presentation showed most beneficial in the Analytic Geometry problem solving aspect, Statistics concept, and overall performance in Statistics.

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### Recommendations

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ICT instruction through PowerPoint presentations could be used as an effective method of imparting knowledge in Statistics, Analytic Geometry, and Physics subjects regardless of the student sex. It is also recommended that ICT instruction through PowerPoint presentation be used in imparting knowledge in Analytic Geometry problem solving aspect and Statistics concepts.

In addition, the conventional method of teaching Analytic Geometry, Physics, and Statistics subjects is still recommended as an effective method of instruction.

A similar study could be conducted to verify the results of the study. Other studies could be conducted on the effectiveness of using ICT in other subjects or topics.

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