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ONE ON ONE.COM: A STRATEGY IN ENHANCING THE COMPUTER LITERACY OF EMPOWERMENT TECHNOLOGY STUDENTS

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ABSTRACT
This action research study is conducted to determine the effect of one-on-one Tutorials with performance task sheets as an intervention for the low performance of students in Isabela School of Arts and Trades Senior High School taking up Empowerment Technology Subject. Thirty-seven students consented to participate in the study. It was found out that the intervention has a medium positive effect in improving the students' computer skills. Thus, the intervention is encouraging to be utilized in the teaching and learning process. The method and procedure of the research used is descriptive comparative design in this study wherein the data were generated from the pre and post-test results of the respondents in their Empowerment of Technology subject for the first semester 2019 – 2020, specifically in learning Competency Advanced Spreadsheet skills.

Keywords:
Learning competency, performance task, post-test, pre-test, spreadsheet

INTRODUCTION

Regardless of where you find a job today, there is a strong chance a computer will be an essential tool you will have to utilize." Furthermore, being computer literate entails having some amount of comfort around computers rather than a fearful expression and a sense of foreboding (Mckay 2019). The researcher believes that basic computer skills knowledge is fundamental in today's environment because everything is centered on technology. Based on DepEd Order 78 S,2010- Guidelines on the implementation of DepEd Computerization Program (DCP), it is stated that there should be a raise of ICT literacy of learners, pupils, students, and school heads and reduce the computer backlog in public school. Therefore, the Department of Education offered Empowerment of Technology subjects in the K-12 Program. This curriculum found everyday productivity and application software in developing ICT content for specific professional tracks and to bring a positive change in their lives as future workers. It includes the application of Advanced Spreadsheet skills wherein the students could develop their skills in using the Advanced Spreadsheet application to organize data in an easy-to-navigate way and do essential and complex mathematical functions many more. Based on the Pretest result of Empowerment Technology Subject (Table 1) majority of them had a low level of skills in learning Competency - Advanced Spreadsheet Skills.

TABLE 1: SUMMARY OF AVERAGE PERCENT FOR EMPOWERMENT TECHNOLOGY			
TOPIC	**FREQUENCY**	**AVERAGE PERCENT**	**QD**
Advanced Spreadsheet Skills			
• Commonly used Microsoft Excel functions	18.91891892	18.91891892	LOW
• Conditional functions	21.62162162	16.6023166	LOW

LEGEND: Absolutely No Mastery 0-0.4 %, Needs Improvement (NI) 0.5-1.5%, Very Low 5-14%, Low 15-34%, Average 35-65 %, Moving Towards Mastery 66-85 %, Closely Approximating Mastery 86-95 %, Mastered 96-100.

The researcher was conceived to address the problem through an intervention with these considerations.

Personal, one-on-one help has always been beneficial to learning, and pupils who receive personal tutoring perform better than those who do not, Halliday (2015). One-on-one tutoring, which leads to students having basic computer skills, is one of the most well-known successful ways of education for helping children enhance their ICT abilities.

Statement of the Problem

This study aimed to determine the effectiveness of One-on-One.com among the Senior High School students in their performance in ICT, particularly in their Empowerment of Technology subject, specifically in Advanced Spreadsheet skills.

Specifically, it aimed to answer the following questions:

1. What is the pre-test score of the respondents before the intervention?
2. What is the post-test score of the respondents after the intervention?
3. Is there a significant difference between the pre-test and post-test scores after the intervention?
4. What is the size effect of the intervention?

Scope and Delimitation of the Study

This study, One on one.com, aimed to help the Grade 11 students of Isabela School of Arts and Trades- Particularly those taking up Empowerment technology as one of the Applied subjects in the K-12 Curriculum. Further, the performance task sheet was also used as a supplementary intervention. The results of this study were utilized to determine the effectiveness of One-on-One Tutorial as an intervention to be used in this research.

How was the intervention adopted in the classroom?

The one-on-one Tutorial was done during the vacant time of the respondents, and to assure the learning is attained, 1 hour per day is allotted for the tutorial sessions, and this is employed for 15 days. After the intervention, the students improved the SHS Empowerment Technology students' skills, making it easier to deal with the skills and knowledge required in using the Advanced Spreadsheet Skills.

METHODS AND MATERIALS

This research used a descriptive comparative design in this study.

The study respondents were the Grade 11 Section WEBER under HUMMS strand and Deaf and Mute students for School year 2019-2020 who are taking up Empowerment Technology subject under the custody of the researcher. The respondents will be pre-

determined based on the pre-test score in their Empowerment of Technology subject for the first semester of 2019 – 2020, specifically in learning Competency Advanced Spreadsheet skills and students fall who fall under 75 percent and below in their score was serve as the respondents.

The information of one on one tutoring as intervention is guided by the following procedure:

1. The teacher assessed the pre-test score of students to determine the learners who needed one-on-one assistance.
2. The scheduled teacher students in their one-on-one Tutorial.
3. The teacher provided a Task sheet/ performance sheet of the students.
4. The teacher conducted Post Test results.
5. Finally, the teacher compared the pre and post-test scores of Empowerment of Technology students after conducting the study.

Statistical Treatment of Data

The researcher used the following to analyze the data collection:

1. Frequency count and percentage were used to assess the respondents' pre– and the post-test score of the respondents before the intervention.
2. Paired T-test was utilized to determine the difference between the pre-test and post-test scores after the intervention.
3. ETA squared was used to compare the effect size at the intervention.

The data will be tabulated and analyzed using Cohen's guidelines.

0.20- small effect
0.50- moderate effect
0.80 and above – significant effect

RESULTS AND DISCUSSION

Thirty-seven students consented to participate in the study. The study respondents were the Grade 11 Section WEBER under HUMMS strand and Deaf and Mute students for School year 2019**-**2020 who are taking up Empowerment Technology subject under the custody of the researcher. The respondents were pre-determined based on the pre-test score; three (3) sections of Grade 11 HUMSS strand and sections majority fall under 75 percent and below in their score was serve as the respondents. *The statistical treatment used in the study is* Frequency count and percentage, Paired T-test, ETA squared, and analyzed using Cohen's guidelines. *As the results,* the respondents' performance in their post-test or after the intervention was implemented out of 50-item test the respondents obtained a score of 33 up to 48, and most of them got a score of 42 with a percentage of 27.8%. This points out that the respondents' performance improved compared to their pre-test scores before the intervention that out of 50-item test the respondents only obtained a score of 4 up to 19 that and most of them got a score of 12 with a percentage of 27.8%. The difference is significant since the t-value computed is less than 0.05 at a 5% significance level. This means that the respondents' performance had improved after the intervention, and the intervention's effect size and a Cohen's D value of 0.480 were calculated. This means that the intervention has a moderate effect size.

This part of the research paper presents what transpires in the study, its findings, and the analysis and interpretation of data. Tables are shown and interpreted to answer the research questions of this research.

Frequency and Percentage Distribution of the Respondent's Performance Before the Intervention

Pre-test Score	Frequency	Percent
4.00	2	5.6
6.00	2	5.6%
7.00	4	11.1%
8.00	5	13.9%
9.00	1	2.8%
10.00	2	5.6%
12.00	10	27.8%
13.00	3	8.3%
14.00	3	8.3%
15.00	1	2.8%
16.00	1	2.8%
18.00	1	2.8%
19.00	1	2.8%
Total:	**36**	**100.00%**

Table 1. The above shows the respondents' performance in their pre-test or before the intervention was implemented. It displays that out of the 50-item test, the respondents obtained a score of 4 up to 19, and most of them got a score of 12 with a percentage of 27.8%.
This indicates that the respondents' performance was deficient.

Frequency and Percentage Distribution of the Respondent's Performance After the Intervention

Post-test Score	Frequency	Percent
33.00	1	2.8%
34.00	1	2.8%
35.00	3	8.3%
37.00	1	2.8%
39.00	2	5.6%
41.00	2	5.6%
42.00	10	27.8%
43.00	2	5.6%
44.00	1	2.8%
45.00	4	11.1%
46.00	1	2.8%
47.00	7	19.4%
48.00	1	2.8%
Total:	**36**	**100.00%**

Table 2. The previous table presents the respondents' performance in their post-test or after the intervention was implemented. It displays that out of the 50-item test, the respondents obtained a score of 33 up to 48 and that most of them got a score of 42 with a percentage of 27.8%. This points out that the respondents' performance improved compared to their pre-test scores. **Paired Samples T-test of the Performance of the Respondents Before and After the Intervention**

	Paired Differences					T	df	Sig. (2-tailed)	Decision	Interpretation
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference						
				Lower	Upper					
Post-test - Pretest	-31.5556	4.91903	0.81984	-33.21991	-29.89120	-38.490	35	.000	Reject Ho	Significant

Table 3: Paired samples t-test was conducted to determine if a significant difference existed between the respondents' performance before and after the intervention. The table above displays that the difference is significant since the t-value computed is less than 0.05 at a 5% significance level. This means that the performance of the respondents had improved after the intervention.

Test of the Level of Significant Effect on the Performance of the Respondents before and after their Exposure to the Intervention

Directional Measures

			Value
Nominal by Interval	Eta	PRE POST	.480

Table 4. Eta squared was used to determine the intervention's effect size, and a Cohen's D value of 0.480 was calculated. This means that the intervention has a moderate effect size.

CONCLUSION

In summary, a one-to-one Tutorial is an effective method of instruction to help students increase their ICT skills; this leads students to be equipped with basic computer knowledge and can perform better than those who do not. Based on the results and findings of the study, there was an increase in the performance of Grade 11 students in using One on One Tutorial. There is a significant difference in the performance of the Grade 11 students before and after the intervention. There is a moderate effect on the level of significance of One on One Tutorial with a significant result, the researcher recommends Teachers teaching ICT in Isabela School of Arts and Trades Main should use One on One Tutorial when teaching the lesson in Empowerment Technology that One on One Tutorial is recommended to be used by other subject teachers and a similar study be conducted further to test the effectiveness of One on One Tutorial.

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