

# How to Improve Photo Editing Skill of Deaf Children

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**Keywords:** Deaf children, Life skill, Photo editing.

**Abstract:** This study is focused on the life skill. Life skill training for the hearing impaired children should begin with simple things like introducing the objectives, benefits, how-to, and so on. The training should be designed in such a way that it fits the characteristics of the children so that they can keep up with the lesson and achieve a satisfactory result. This study used an experiment method. The data were analyzed using the Wilcoxon test because this test can be used to measure a pair of data with small samples, but also it does not require normality test. An experiment study is a way to find a causal relationship between two variables manipulated by the researchers. Based on the pretest and posttest scores, as well as the score difference, it could be revealed that the overall score of photo editing skills of the students significantly improved.

## 1 INTRODUCTION

How can we develop photo editing skills of children with hearing impairment? Teaching life skills to children with special needs is an important factor in developing the abilities of the students and in preparing them to be independent once he finishes his school (Olivos et al., 2016). A life skill is every individual's must have thing because basically every life skill can give positive impact to his life. Children with special needs, especially those with hearing impairment, tend to be slow to adapt to the environment as the impact of the hearing impairment (Rychen and Salganik, 2003). A life skill may help a child live independently and play his role in a social context. Schools, as educational institutions, must equip their students with life skills in order for them to be independent. Basically, every school has already had a life skill program specifically design for hearing and speech impaired children; however, the types of life skills provided has not adequately sufficient (Jegannathan, Dahlblom, and Kullgren, 2014). Most special schools only provide; for example, their students with the likes sewing, gastronomy, and crafting programs (Simona, 2015). With the current advancement of technology, children with special needs inevitably have to keep abreast of the latest developments. There are many skills with which they can be equipped. For instance, they can be taught how to use such computer programs as office suit

application, AutoCAD, and the photo editing program Adobe Photoshop. Computer program of this likes can be taught to children with special needs including hearing impaired and mute children (Kožuh, Hintermair, and Debevc, 2016).

According to (Huang, Hong, and Ma 2005), skills fall into four types: motoric skill, intellectual skill, social skill, and life skill. This study is focused on the life skill. This paper will discuss the learning process in photo editing. Why photo editing? Photo editing is one of technology-related life skills (Neghavati, 2016), and the researchers assume that hearing impaired and mute children can be taught this skill. Besides, this skill does not require children to always speak. Photo editing skill can make it possible for the hearing impaired and mute children to get hired or open his own photo editing startup. This market niche is huge. Photos of such typical events as wedding party, birthday party, graduation, funeral, and even personal photos need editing. Photo editing is not a rocket science. With a well-structured training, children can do it. This is in line with a study conducted by (Maryam, Davoud, and Zahra, 2011) photo editing skills training is a type of skill that requires a systematic step.

This study is focused on the life skill. Life skill training for the hearing impaired children should begin with simple things like introducing the objectives, benefits, how-to, and so on. The training should be designed in such a way that it fits the

characteristics of the children so that they can keep up with the lesson and achieve a satisfactory result (Morley, 2012). The researchers wanted to provide a skill training that had not been provided by the school; i.e., how to use Adobe Photoshop to edit photos/images. Adobe Photoshop application is a photo editing computer program of the easiest to learn. This training was very suitable for the hearing impaired children that are known to be visual learners. It was expected that, equipped with this skill, the students can heighten up their chances to be hired in such a fast-growing market as photo editing service. In this photo editing training, the trainer provides four expertise that can be had in photo editing. First about replacing the background, then cleaning the stains on the face, adjusting the lighting and adding words in the photo.

This research is important to do because, researchers assess deaf children should have skills related to life skills, and not just in academics. The next reason the researchers hope deaf children can be independent after completing education in school.

This study used an experiment design. An experiment study is a way to find a causal relationship between two variables manipulated by the researchers. Based on the pretest and posttest scores, as well as the score difference, it could be revealed that the overall score of photo editing skills of the students significantly improved. In general, this study was aimed at improving hearing impaired students' skills to edit photos using Adobe Photoshop (Sagebiel, 2017). In particular, this study was aimed at providing basic photo editing training that included facial skin smoothing, background changing, and captioning.

## 2 RESEARCH METHODS

This study used an experiment design. An experiment study is a way to find a causal relationship between two variables manipulated by the researchers (O'Sullivan et al., 2016). An experiment is always conducted to measure the effect of a treatment. This definition suggests that an experiment is a deliberate modification of condition that is controlled to determine the events and to observe the changes in the events (Kampen et al., 2004). This study used a one group pretest-posttest design. It was carried out

in three steps, as explained by (Green, and Huntington, 2016): "first, measuring the dependent variable before the treatment; second, giving the treatment to the samples; and third, re-measuring the dependent variable after the treatment.

This study delimited itself to four aspects of photo editing skills: Facial stain removal, light adjustment, background changing, and photo captioning. Samples are the representatives of the population (Hadi, Hassan, Razzaq and Mustafa, 2015). The samples were five ninth grade students at SLB B X of Bandung selected randomly. The study was conducted within a two month. The gathered data was analyzed using Wilcoxon test because this test can be used to measure a pair of data with small samples, but also it does not require normality test (Yeo, 2016). The analysis was conducted to simplify the data into a form that can easily be read and interpreted (Kasuya, 2010). The photo editing program used in this study is Adobe Photoshop CS.

## 3 RESULTS AND DISCUSSION

This study was used an experiment method, Research experiments can show the difference in results after the training (Lasprilla-Botero, Álvarez-Láinez, and Acosta, 2017) given photo editing conducted using a one group pretest-posttest experiment design with the following steps: 1) pretest, which was carried out to measure the samples' initial photo editing skills using Adobe Photoshop before the treatment, 2) treatment, which was photo editing training using Adobe Photoshop, and 3) Posttest, which was carried out to measure the photo editing skills using Adobe Photoshop after the treatment using a predetermined assessment criteria.

Description of the assessment criteria:

- Value 0 = The child is totally incapable for editing the photo.
- Value 1 = The child is still doubtful for editing the photo.
- Value 2 = The child start to able editing the photo within prompting.
- Value 3 = The child already have been able to edit the photo without prompting the teacher.

What follows are the result of the pretest and posttest:

Table 1: Pretest and posttest scores of photo editing by hearing impaired students.

| No | Sample | Photo Editing Score  |          |                     |          |            |          |                     |          |
|----|--------|----------------------|----------|---------------------|----------|------------|----------|---------------------|----------|
|    |        | Facial Stain Removal |          | Lighting Adjustment |          | Captioning |          | Background Changing |          |
|    |        | Pretest              | Posttest | Pretest             | Posttest | Pretest    | Posttest | Pretest             | Posttest |
| 1  | STD 1  | 0                    | 2,8      | 1,8                 | 2        | 1,6        | 2,2      | 1,8                 | 2,4      |
| 2  | STD 2  | 0                    | 1,6      | 0                   | 2,4      | 2,6        | 3        | 3                   | 3        |
| 3  | STD 3  | 0                    | 3        | 0                   | 2,2      | 0,8        | 1,6      | 0                   | 1,8      |
| 4  | STD 4  | 0                    | 1,6      | 0                   | 2,2      | 1,4        | 1,6      | 0,6                 | 2,8      |
| 5  | STD 5  | 0                    | 2,4      | 2,4                 | 3        | 2,6        | 2,8      | 2,6                 | 3        |

Table 1 describes the pretest and posttest scores of the hearing impaired students who were trained to edit photos. The training included four aspects: background changing, facial glare removal, lighting adjustment, and captioning. These are the basic photo editing skills. The STD 1, 2, 3, 4, and 5 of the pretest score for facial stain removal training was 0. This happened because the students had trouble removing the facial stains. However, after they received training, they improved significantly. The posttest score STD 1 = 2.8, STD 2 = 1.6, STD 3 = 3, STD 4 = 1.6, and STD 5 = 2.4. For the lighting adjustment, the pretest score STD 1 = 1.8 and STD 5 = 2.4, STD 2 and STD 3 = 0. After a continual training, students' posttest score improved significantly with STD 1 = 2, STD 2 = 2.4, STD 3 = 2.2, STD 4 = 2.2, and STD 5 = 3. Students did not have considerable problems in photo captioning. The pretest score STD 1 = 1.6, STD 2 = 1.8, STD 3 = 0.6, STD 4 = 1.6, and STD 5 = 2.8. For background changing, students' posttest score STD 1 = 2.4, STD 2 = 3, STD 3 = 1.8, STD 4 = 2.8, and STD 5 = 3. After a month of training, the students were able to remove facial stain, change background, adjust lighting, and caption the photos. The significant improvement was a result of their determination in the training so that they got very good posttest scores, this proves that the photo editing training can improve the skills of deaf students (Novakovich, Miah, and Shaw, 2017).

#### 4 DISCUSSION

Upon completion of the study, the researchers found the strengths and limitations in conducting a photo editing training using Adobe Photoshop program. One of the strengths was students' enthusiasm to participate in the training. They kept practicing to edit photos using Adobe Photoshop program. In addition, during the training each student was provided with one computer for them to practice. The limitations were generally divided into two. First, not all students

have a computer at home. Second, the lack of teachers to teach them photo editing. However, the students were able to edit photos very well of the results obtained by the students.

Adobe photoshop prove that the program is a program that is easy to learn (Simsek, and Erdener, 2012). This in line with a saying that gradual and sustainable learning will bring forth a maximum result. The results of this study show an increase, it affects the education of deaf students. based on that, the students now have photo editing skills that can support deaf students life skills to live independently in the future (Beck et al., 2016)

#### 5 CONCLUSION

Based on the result of data analysis and hypothesis testing, it can be concluded that Adobe Photoshop training program in this study can improve hearing impaired students' photo editing skills. Their photo editing skills improved after receiving the training in facial stain removal, background changing, captioning, and lighting adjustment.

For the next researchers, the authors are aware that there are still many shortcomings in this study, the researchers only provide photo editing training on four aspects of changing the background image, adjust the lighting on the photo, give a writing on the photo, and clean the face stain on the photo. The authors hope to the next researcher to provide training with other materials more widely.

Fifth of students who take the training already showing progress in photo editing capabilities. Training on photo editing adobe photoshop program for deaf students need to be considerate of the school to help improve the skills of deaf students, as this skill is one of the skills that are appropriate for deaf students.

## REFERENCES

- Beck, S., Meier-Klages, V., Michaelis, M., Sehner, S., Harendza, S., Zöllner, C., Kubitz, J. C. 2016. Teaching school children basic life support improves teaching and basic life support skills of medical students: A randomised, controlled trial. *Resuscitation*, 108, 1-7.
- Green, J. K., Huntington, A. D. 2016. Online professional development for digitally differentiated nurses: An action research perspective. *Nurse Education in Practice*, 22, 55-62.
- Hadi, M. Y. A., Hassan, R., Razzaq, A. R. A., Mustafa, M. Z. 2015. Application of thinking skills in career: a survey on technical and vocational education training (TVET) qualification semi-professional job duties. *Procedia-Social and Behavioral Sciences*, 211, 1163-1170.
- Huang, K., Hong, W., Ma, Y. 2005. Symmetry-based photo-editing. *Pattern Recognition*, 38(6), 825-834.
- Jegannathan, B., Dahlblom, K., Kullgren, G. 2014. Outcome of a school-based intervention to promote life-skills among young people in Cambodia. *Asian Journal of Psychiatry*, 9, 78-84.
- Kasuya, E. 2010. Wilcoxon signed-ranks test: Symmetry should be confirmed before the test. *Animal Behaviour*, 79(3), 765-767.
- Kampen, T., Bekkali, A., Thurzo, I., Zahn, D. R. T., Bolognesi, A., Ziller, T., Lugli, P. 2004. Barrier heights of organic modified schottky contacts: Theory and experiment. *Applied Surface Science*, 234(1), 313-320.
- Lasprilla-Botero, J., Álvarez-Láinez, M., Acosta, D. A. 2017. Water-based adhesive formulations for rubber to metal bonding developed by statistical design of experiments. *International Journal of Adhesion and Adhesives*, 73, 58-65.
- Simona, G. 2015. Teacher training for embedding life skills into vocational teaching. *Procedia-Social and Behavioral Sciences*, 180, 814-819.
- Kožuh, I., Hintermair, M., Debevc, M. 2016. Community building among deaf and hard of hearing people by using written language on social networking sites. *Computers in Human Behavior*, 65, 295-307.
- Maryam, E., Davoud, M. M., Zahra, G. 2011. Effectiveness of life skills training on increasing self-esteem of high school students. *Procedia-Social and Behavioral Sciences*, 30, 1043-1047.
- Morley, D. A. 2012. Enhancing networking and proactive learning skills in the first year university experience through the use of wikis. *Nurse Education Today*, 32(3), 261-266.
- Neghavati, A. 2016. Core Skills Training in a Teacher Training Programme. *Procedia-Social and Behavioral Sciences*, 232, 617-622.
- Novakovich, J., Miah, S., Shaw, S. 2017. Designing curriculum to shape professional social media skills and identity in virtual communities of practice. *Computers & Education*, 104, 65-90.
- Olivos, P., Santos, A., Martín, S., Cañas, M., Gómez-Lázaro, E., Maya, Y. 2016. The relationship between learning styles and motivation to transfer of learning in a vocational training programme. *Suma psicológica*, 23(1), 25-32.
- O'Sullivan, K. C., Howden-Chapman, P., Sim, D., Stanley, J., Rowan, R. L., Clark, I. K. H., Waiopahu College. 2015. Research team. (2016). cool? young people investigate living in cold housing and fuel poverty. A mixed methods action research study. *SSM-Population Health*, 3, 66-74.
- Rychen, D. S., Salganik, L. H. (Eds.). 2003. *Key competencies for a successful life and well-functioning society*. Boston, USA: Hogrefe Publishing.
- Sagebiel, J. 2017. Preference heterogeneity in energy discrete choice experiments: A review on methods for model selection. *Renewable and Sustainable Energy Reviews*, 69, 804-811.
- Simsek, B., Erdener, B. 2012. Digital visual skills education for digital inclusion of elder women in the community. *Procedia-Social and Behavioral Sciences*, 46, 4107-4113.
- Yeo, I. K. 2016. An algorithm for computing the exact distribution of the wilcoxon signed-rank statistic. *Journal of the Korean Statistical Society*.