PichArt Application and Remove Background in SLB Tunas Kasih Surabaya

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	ABSTRACT
Keyword: Aplikasi PichART Design Remove Background Special Need	Graphic design learning has an important role in developing student creativity, including students with special needs at the Tunas Kasih Special School (SLB) Surabaya. This research aims to implement the PichART application as a learning medium in making posters, especially in the remove background feature, for SLB Tunas Kasih Surabaya students. The PichART application was chosen because of its ease of use and various features that support student creativity. The method used is an experimental study with a practical approach where students are given tutorials and direct practice using the application. The research results chart that using PichART explicitly in using
	the remove background feature. In addition, students showed increased learning motivation and creativity in completing design assignments. This research concludes that PichART can be an effective learning tool in supporting the teaching of graphic design for students with special needs, and is able to facilitate them to be more independent and creative in their work.

INTRODUCTION

Tunas Kasih Special School (SLB) is an educational institution for children with special needs (ABK) located on *Jalan Menanti Jeruk Gang IV Nomer 12A, Jeruk, Kecamatan Lakarsantri* Surabaya City. Based on observations made, this school handles four types of children with special needs as follows; 1) mentally retarded, 2) deaf, 3) autistic, and 4) Down syndrome. 56% of students are classified as mentally retarded, who are children with low intellectual abilities and have an IQ between 70-90 (Setiawan, 2024a). Amelia also explained that mentally retarded children have low comprehension abilities, are slow in carrying out academic tasks, and have very low learning achievements (Natsopoulos & Xeromeritou, 1988). This low understanding ability makes it difficult for children to socialize, even though communication is very important in children's development (Hanifah Salsabila et al., 2020).

Children with special needs have the same right to obtain a decent education, but in reality, educational services are less than optimal, one of the causes is the less-thanoptimal use of learning media that is adapted to children with special needs, both aggressively and inclusively (Bayu et al., 2019). Human resources (HR) on the teacher side do not all have the competency to master specific skill material due to their HR educational background from the SLB department (Ahmad & Khasawneh, 2023). Most of the teachers are class teachers, and not all of them have taken part in training to deepen mastery of learning skills such as design and crafts. On the other hand, to increase skills and generate economic output independently, you must have skills (Miernyk, 2020). These four topics have their own urgency, especially in educational institutions as places for children to learn. Proceeding of International Joint Conference on UNESA Homepage: https://proceeding.unesa.ac.id/index.php/pijcu ISSN: 3032-3762

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THEORY OF LITERATURE

Learning Technology at Special Schools

The use of technology in education for students with special needs has become an essential approach in the learning process. According to Warsito (2017) (Khursheed Ahmad, n.d.), the application of educational technology in inclusive schools and special education schools (SLBs) can enhance students' learning motivation and independence in participating in lessons. Technology enables students to learn more independently and tailor materials to their individual abilities. Multimedia applications, such as graphic design software, serve as effective tools to accommodate visual learning for students with special needs (Rafikayati, A., et al., n.d.)

2. Graphic Design Education for Students with Special Needs

Graphic design is a skill that can be taught to students in SLBs as a form of creative visual expression. Indicates that graphic design education can help SLB students develop fine motor skills, cognitive abilities, and aesthetic appreciation (Saeful Rahmat & Suryani, 2024). Graphic design education, particularly in poster creation, involves creative thinking, visual arrangement, and the use of supportive technology. This is crucial for students with special needs as it provides them with opportunities for independent expression.

3. PichART Application as a Learning Tool

PichART is recognized as one of the most popular photo-editing applications, particularly for its ease of use in various design features, such as background removal. PichART's user-friendly interface makes it accessible even for beginners, including students with special needs. The background removal feature in this application allows users to automatically or manually eliminate image backgrounds, which greatly facilitates poster design processes. This also supports more inclusive and interactive graphic design education (Jia et al., 2015).

4. Background Removal Feature in Graphic Design

The background removal feature in graphic design applications is a critical element in creating professional posters. this feature assists users in focusing attention on the main object without distractions from background elements (Fleming et al., 2019). Its use is particularly relevant in poster design education at SLBs, as it helps students organize visual elements more simply and clearly. Applications with automatic background removal features also provide advantages for students with motor impairments, allowing them to edit images more easily (Setiawan, 2024b).

5. Impact of Graphic Design Technology on Creativity in SLB Students

The use of technology applications in graphic design education has a significant impact on fostering creativity in students. (Setiawan, 2024b) argues that technology stimulates creative ideas through various tools, such as filters, templates, and image editing features. For SLB students, graphic design technology also provides them with the freedom to express themselves, which can boost confidence and independence. This aligns with the findings (Jia et al., 2015), who highlights that applications like PichART allow students to produce creative works more efficiently, even when faced with physical or cognitive limitations. Proceeding of International Joint Conference on UNESA Homepage: https://proceeding.unesa.ac.id/index.php/pijcu ISSN: 3032-3762

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RESEARCH METHOD

The approach used in this research is a qualitative approach. The qualitative approach focuses on in-depth observation of a problem. According to (Hammarberg et al., 2016) qualitative is a research method that focuses on the procedures for using tools and techniques. According to (Aspers & Corte, 2019) in his research, he concluded that the focus of qualitative research is on the process and meaning of the results. A qualitative approach means processing data and collecting data by means of interviews, observation and documentation. Qualitative research is influenced by the truth and validity of the analytical data obtained.

According to (Creswell, 2007) a case study is a research strategy for carefully investigating something by collecting complete information using various data collection procedures. This research was conducted at SLB Tunas Kasih Surabaya, East Java, with the research subjects being 5 students with special needs diagnosed with autism spectrum disorder and hearing impairment. The method used is an experimental study with a practical approach where students are given tutorials and direct practice using the application. This research used observation and interview methods with teachers at ACT Surabaya, as well as observing the students' work. After all the data is collected, data analysis is carried out and then matching the results of the analysis with the results of interviews, literature studies and documentation. The final stage is interpreting the solution as an alternative solution and writing the research results.

RESULTS AND DISCUSSION

Designing activities are one of the programs launched at SLB Tunas Kasih Surabaya, this is carried out in accordance with the learning objectives of providing students with skills to survive after graduating from the school. So Tunas Kasih offers similar programs such as basic painting skills and making crafts. After the research visited schools, there were problems that arose due to the large number of teachers moving home base, so that the number of teachers was reduced. This also had an impact on teaching and learning practices for children, so the institution and researchers coordinated to organize training activities to equip students to create designs that would be transferred to tracing media which will later be pressed on other products. Activities are carried out in accordance with agreements with partners, product development is carried out on t-shirts, wall clocks, pouches, tote bags and other products that can be used as screen printing media. The activity was carried out at the SMALB level with the number of students being 5 out of 38 students. The activity was held one week after the school introduction activity. Namely with the following details.

1. Providing Materials

The activity was held on July 24th 2024 by providing basic knowledge regarding examples of photos resulting from the application of PichART and remove background as a trigger for students' desire to know more about the PichART application and remove background. Introduction to children with special needs is different from general students. There needs to be a special approach according to the characteristics of each student. Student A has a quiet character but likes watching YouTube videos and can imitate them, so the material is taken from YouTube videos, while B and C are girls who seem quiet and are not used to technology. So B and C start by watching and trying to directly practice PichART and remove the background directly via the computer. So habituation is also needed in learning. Student D prefers to communicate and be active

in activities, so they are given material in interesting module books. Meanwhile, lastly, student E showed very good visual abilities so he was only accompanied briefly and then was able to provide assistance to his friends in understanding the PichART application material and removing backgrounds.

2. Demonstration and practice

The activity was held on July 25 2024, a demonstration that continued previous activities as a form of actualizing the material at the previous meeting. At this meeting, the results of all students had created designs according to their preferences. The results of the mentoring are as follows:



Figure 1. Results of applying PichART and removing background

The results of the practice above have provided good improvements, it can be seen from the composition they created using the middle composition and also considering the side composition in design 1 with the flower composition applied. In terms of color, contrast with the background of the image has also been paid attention to.

3. Application to the product

The activity will be held on July 31 2024, this activity will be implemented using images made on prepared t-shirts. The image results are as follows.



Figure 2. Application of images to t-shirts

The results of the application were also applied by Tunas Kasih High School students using the technique of printing on tracing paper and pressing using a simple method using an iron due to limited tools. To maintain safety, assistance is provided because an iron is an object that produces heat but is unusual for children with special needs.

From the overall results of implementing the PichART application and removing background, it provides motivation for students to learn because it provides a new experience which is a special attraction, apart from that the images offered can be applied easily. As for the next suggestion, you can use an application that can directly combine image editing and background removal.

CONCLUSION

This research shows that the use of the PichART application in learning poster design at SLB Tunas Kasih Surabaya has a positive impact on the development of creativity and skills of students with special needs. The features in the PichART application, especially removing background, have proven to be easy to use and effective in supporting an interactive and inclusive visual learning process. By utilizing this application, students can produce more professional poster designs and be able to manage visual elements better. Apart from that, the application of technology in graphic design learning has also been proven to increase students' motivation and self-confidence, as well as encouraging them to be more independent in their work. The use of the PichART application has succeeded in providing flexible and adaptive alternative learning media for students with physical and cognitive limitations. Therefore, this application is recommended to continue to be used as a tool in teaching graphic design in special schools, and can be further developed to train other skills that support student creativity.

REFERENCES

- Ahmad, M., & Khasawneh, S. (2023). Interactive Multimedia to Improve Reading Skill of Students with Special Needs. *Journal of Namibian Studies*, *34*, 437–456.
- Aspers, P., & Corte, U. (2019). What is Qualitative in Qualitative Research. *Qualitative Sociology*, 42(2), 139–160. https://doi.org/10.1007/s11133-019-9413-7
- Bayu, M., Sampurno, T., & Camelia, I. A. (2019). Art and Fun Digital Learning for Children with Special Needs A Case Study on Applying Art as a Learning Technology.
- Creswell, J. W. (2007). *Qualitative inquiry and research design : choosing among five traditions*. SAGE.
- Fleming, S. J., Chaffin, M. D., Arduini, A., Akkad, A.-D., Banks, E., Marioni, J. C., Philippakis, A. A., Ellinor, P. T., & Babadi, M. (2019). Unsupervised removal of systematic background noise from droplet-based single-cell experiments using <tt>CellBender</tt> https://doi.org/10.1101/791699
- Hammarberg, K., Kirkman, M., & De Lacey, S. (2016). Qualitative research methods: When to use them and how to judge them. In *Human Reproduction* (Vol. 31, Issue 3, pp. 498–501). Oxford University Press. https://doi.org/10.1093/humrep/dev334
- Hanifah Salsabila, U., Ahmad Dahlan Yogyakarta, U., Satriafitri, N., & Putri Vikasari, D. (2020). Optimasi Teknologi Pendidikan Untuk Anak Berkebutuhan Khusus Dalam Pembelajaran Pai Di Slb Islam Qothrunnada Angga Yuniarto 2. 06. https://doi.org/10.24127/att.v6521a2366
- Jia, L., Yarlagadda, R., & Reed, C. C. (2015). Structure based thermostability prediction models for protein single point mutations with machine learning tools. *PLoS ONE*, *10*(9). https://doi.org/10.1371/journal.pone.0138022
- Khursheed Ahmad, F. (n.d.). Use of Assistive Technology in Inclusive Education: Making Room for Diverse Learning Needs.
- Miernyk, W. H. (2020). *The Elements of Input-Output Analysis*. https://researchrepository.wvu.edu/rri-web-book

- Natsopoulos, D., & Xeromeritou, A. (1988). Comprehension of "Before" and "After" by Normal and Educable Mentally Retarded Children. In *Journal Of Applied Developmental Psychology* (Vol. 9).
- Rafikayati, A., Isni Badiah, L., Hidayati, N., Rizky Idhartono, A., Fadillah Abid, A., Fuanindah Prodi Pendidikan Khusus, L., & PGRI Adi Buana Surabaya, U. (n.d.). *EKOBIS ABDIMAS* Workshop Modifikasi Teknologi Asistif dalam Pembelajaran Bagi siswa Berkebutuhan Khusus kepada Guru SLB Dharma Wanita Sidoarjo.
- Saeful Rahmat, P., & Suryani, Y. (2024). How to cite: Nurhayati et al (2024). The Effect of Using Problem Based Learning Model on Critical Thinking Ability with Moderator Variable of Learning Motivation The Effect Of Using Problem Based Learning Model On Critical Thinking Ability With Moderator Variable Of Learning Motivation. *Eduvest-Journal of* Universal Studies, 4(8), 7294–7311. http://eduvest.greenvest.co.id
- Setiawan, A. (2024a). Use Of Canva Application As Information Technology-Based Learning Media To Improve Social Media Motivation For Pk-Plk Teachers In Tulungagung District. *International Conference on Aplied Social Sciences in Education*, 1(1), 541–550. https://doi.org/10.31316/icasse.v1i1.6905
- Setiawan, A. (2024b). Use Of Canva Application As Information Technology-Based Learning Media To Improve Social Media Motivation For Pk-Plk Teachers In Tulungagung District. *International Conference on Aplied Social Sciences in Education*, 1(1), 541–550. https://doi.org/10.31316/icasse.v1i1.6905