

Challenging of Pesantren Students on Technology Era 4.0

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Abstract

This research investigated the Challenging of Pesantren Students on Technology Era 4.0. Technology from time to time is developing. It could be challenging for people, especially for students at Pesantren. They could not reach devices as they want. They lived in a place where conducted limited devices. The research purpose was used to answer the "How are Pesantren students challenging technology 4.0?". It was conducted with a single case study. To collect the data, the researcher used setting or natural conditions, primary and secondary source data, and most data that got from observation, interviews, and documents. The steps of data collection are data reduction, data display, and conclusion drawing/verification. Trustworthiness was used in this study to make it reliable and valid. The researcher drew the conclusion based on the findings and discussions of the data; it can be concluded that there are two conclusions. First, technology era 4.0 for Pesantren students gave a positive effect. The discipline of the place where they live avoided the negative aspect of technology such as hoax news, and being a creative person because of the limitation of accessing the internet. They live in real life physically and psychologically. From a health aspect, they avoided radiation. Thus, they focused on their era now in a health condition. Second, technology era 4.0 for Pesantren students gave negative effects such as they only the users, not the developer or creators. The researcher hopes, that further researchers will be better, more complete, and more wonderful in their analysis of the media and social development aspect of the education section.

Keywords: *Challenging; Education; Media; Pesantren; Social Development; Students; and Technology Era 4.0.*

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Tantangan Santri di Era Teknologi 4.0

Abstrak

Penelitian ini mengkaji tentang Tantangan Santri Pesantren di Era Teknologi 4.0. Teknologi dari waktu ke waktu terus berkembang. Hal ini bisa menjadi tantangan bagi masyarakat, terutama bagi para santri di Pesantren. Mereka tidak dapat menjangkau perangkat sesuai dengan yang mereka inginkan. Mereka tinggal di tempat dengan keterbatasan akses internet. Tujuan penelitian ini dimaksudkan untuk menjawab pertanyaan penelitian "Bagaimana santri pesantren menghadapi tantangan teknologi 4.0?". penelitian ini dilakukan dengan studi kasus tunggal. Untuk menghimpun data, peneliti menggunakan setting atau kondisi alamiah, sumber data primer dan sekunder, dan sebagian besar data diperoleh dari observasi, wawancara, dan dokumen. Langkah-langkah pengumpulan data yang digunakan adalah reduksi data, display data, dan penarikan kesimpulan/verifikasi. Kredibilitas yang digunakan dalam penelitian ini bertujuan agar penelitian valid. Peneliti menyimpulkan berdasarkan temuan dan pembahasan data; dapat disimpulkan bahwa ada dua kesimpulan. Pertama, era teknologi 4.0 bagi santri memberikan dampak positif. Kedisiplinan tempat tinggalnya dapat menghindari aspek negatif dari teknologi seperti berita hoax, dan menjadi orang yang kreatif karena keterbatasan akses internet. Mereka hidup dalam kehidupan nyata secara fisik

dan psikologis. Dari segi kesehatan, mereka terhindar dari radiasi. Jadi, mereka fokus pada jamannya sekarang dalam kondisi sehat. Kedua, era teknologi 4.0 bagi santri memberikan dampak negatif seperti untuk penggunaanya saja, bukan pengembang atau pembuatnya. Peneliti berharap, peneliti selanjutnya akan lebih baik, lebih lengkap, dan lebih hebat dalam menganalisis aspek media dan perkembangan sosial bagian pendidikan.

Kata Kunci: *Era Teknologi 4.0.; Media, Pendidikan; Perkembangan Sosial; Pesantren; Santri dan Tantangan*

INTRODUCTION

In this era, technology has a big role in human life. Almost people need technology as a tool in their life. Technology gives a great impact as long as used properly based on the needs. While technology could be a negative impact on human life when use unwisely. Both impacts indicate in any sector, including education. Students as the main component of the education field feel the effect directly, especially while covid-19 time. Almost students study online. They are forced to know the technology; they do have not a choice. As Kishore (2018, p. 26) stated technology helps students to create a learning environment better.

One of the educational systems in Indonesia is a boarding school or *Pesantren*. When other students study online, they still study face-to-face. They live in the same location, do their activity together, and live as a family. That is why face-to-face study could be held face-to-face. The students there live with limited access to the internet. Using and mastering technology in this era is necessary for students regardless of its impact. Based on the elaboration above, the researcher analyze the challenges students *pesantren* in the technology era.

LITERATURE REVIEW

The Impact Of Technology

In the education field, technology could be used to improve the learning

process. Nethra (2019, p. 166) stated that the influence of technology on students' learning is accessed via communication, convenience, and control. The benefits of technology for students in this modern era can be felt only if they are used properly. Technology as a facilitator for humans has positive and negative effects. The explanations of these effects are as follows:

The Positive Effect Of Technology On Students

Technology can improve the teaching-learning process. It helps the learning process lively and communicatively, especially for auditory and visual learners. Teachers can create interactive teaching media. Furthermore, enjoyable and easy learning can be felt by students. Now a day, the function of the teacher in the classroom is as a facilitator. Students explore their abilities and knowledge using technology.

Technology is a big tool to improve teaching-learning. The internet helps students to access unlimited knowledge. Decreasing space and time. It runs a big role in students' materials. They get sources from anywhere and anytime. Helping students to increase their cognitive skills and academic performance while using technology. Also, enriching and mastering any languages they want from home without spending a lot of money and time. Kishore (2018, pp. 26-27) found the

study that using technology in studying mathematics will give a positive result on their learning. The educators noted that the internet provided math tricks at different levels. Technology serves students to enhance their success in school. Technology cuts space barriers in the learning process.

Kishore (2018, p. 27) declared that technology and education are a great combination if they use together for cause and idea. Technology for school stakeholder, teachers, students, and parents are important. Some of how technology improves education: *First*, Online learning is a formal system in the education field; *Second*, Teachers easy to meet students or parents through online platforms such as Zoom, google meet, or others; *Third*, Students easier and quicker to access information and sources of learning they need than before; and *Forth*, Trusted resources easier to get for both teachers and students with unlimited access.

The Negative Effect Of Technology On Students

Technology has a big positive effect on humans, especially on learners as mentioned before. Meanwhile, technology also has a negative effect on them such as their destruction, mental health, physical health, and social health.

Using technology improperly causes destruction for humans, it will cause serious damage over time. Free access to the internet to get more information and reference to learning gives a negative effect when they use it unwisely. Increasing plagiarism in studying cannot be avoided. Also, they can read hoax news easily. All of these activities caused diminished students' analysis

and critical thinking abilities. In physical health effect, the devices of electronic emit radiation and are harmful to the human body. Overuse of computer, laptop, mobile phone, headphone, earphone, and any devices cause back pain, eyesight problem, loss of hearing, and other physical diseases. Using technology reduces human movement, it leads to obesity and stress.

In social life, technology helps to cut space among humans. In reality, it replaces real communication and ends in social rejection and isolation. They cannot make eye contact, listen to voice tone, or see facial expressions. They reduce the empathy, confidence, and social aspect of students. Because the key to social health is face-to-face interaction.

Relevant Studies

Five previous studies on some issues have been found. It directed to find out the factors that have contributed to the improvement of challenging students in the technology era. There are four factors of previous research. They are Alhumaid (2019), Nethra (2019), Carstens et al (2021), Haddock et al (2022), and Homaid (2022).

Alhumaid (2019) investigated four ways technology has negatively changed education. She focused her study on classroom technology. She found that technology could change education negatively through four paths, namely deteriorating students' competencies in reading and writing, dehumanizing educational environments, distorting social interactions between teachers and students, and isolating individuals when using technology.

Nethra (2019) investigated the impact of technology on education. She focused on the impact of technology. She found that technology has revolutionized the field of education. Students have easy access to research tools and other related materials and teachers used technology to improve the impact of the lessons.

Carstens et al. (2021) investigated the effects of technology on students learning. They focused their study on teachers. They found that more training for teachers and students is necessary to better implement technology in the classroom. Also, they pointed out that students are more engaged and comfortable with technology. Yet they can become a management concern.

Haddock et al (2022) investigated the positive effects of digital technology use by adolescents: a scoping review of the literature. They focused their study on how adolescent immersion in an increasingly ubiquitous digital world engenders positive outcomes in terms of brain, cognitive, and social-emotional development. They identified positive outcomes for adolescents who use different types of digital tech, including the internet, social media, and video game.

Homid (2022) investigated problematic social media use and associated consequences on academic performance decrement during covid-19. He focused his study on the social media usage characteristics of undergraduate students in Saudi Arabia during Covid-19. He found that WhatsApp, Snapchat, Twitter, and Instagram are the most popular social media networks used by undergraduates while Facebook and Skype are the least preferred. He also stated that thirty-one-

point forty-one percent (31.41%) of students spend more than six hours a day in social media. These findings will help educators and stakeholders to design appropriate interventions and strategies to minimize the unfavorable effects of social media in academia.

Nethra's study (2019) has the closest investigation of this research. However, this study will analyze the positive and negative impact of technology on students who live at *pesantren* or boarding schools. This place has limited access to the internet. From five previous studies, it seems not yet to carry out the study of both impacts. Thus, this study will investigate it entitled "Challenging of *Pesantren* Students on Technology Era 4.0"

METHODOLOGY

A single-case method was used to analyze this research. Qualitative method as a design of this research. I will analyze a single-case study of challenging students' *pesantren* in the technology era. This study addressed the question of "How are *pesantren* students are challenging in technology era 4.0?". I will carry out the positive and negative impact of technology for students, especially *pesantren* students.

The setting of this study is Daarul Qur'an boarding school, it is one of the boarding schools in West Java, Indonesia. Sugiono (2011, p. 292 cited in Naserieh, 2013, p. 31) said that the instrument of qualitative research is the researcher. Thus, the instrument of this study is the researcher herself. She spent her time and ability to observe, interview, and analyze the subjects. The instrument used to collect

the research data. While participants of this study are the students of Daarul Qur'an boarding school.

In collecting the data, the researcher used setting, primary, and secondary source data. The most data got from observation and interviews. In observation, the researcher used the observation guide-line as follows:

Table 1. Observation Guide-line

No	Indicators
1	Role of technology on <i>Pesantren</i> students' activity
2	Kind of technology accessed by <i>Pesantren</i> students
3	The positive impact of technology on <i>Pesantren</i> students
4	The negative impact of technology on <i>Pesantren</i> students

Adapted from Merriam (2009, pp. 120-121)

To make sure the data was, the researcher used depth interviews by using multiple questions to investigate *pesantren* students' challenges in the technology era. This interview is necessary to know past information that is possible to replicate (Merriam, 2009, p. 88 cited in Sholehah, 2018, p. 160). The interview guide-line used in this study are as follows:

Table 2. Interview Guide-line

No	Outlines
1	To know the participants' profile
	To investigate the role of technology on <i>Pesantren</i> students' learning activity
	To know the kind of technology accessed by <i>Pesantren</i> students
2	To know the purpose of using technology for <i>Pesantren</i> students

	To know the duration average in using technology by <i>Pesantren</i> students
3	To discover the positive impact of technology on <i>Pesantren</i> students
4	To discover the negative impact of technology on <i>Pesantren</i> students

Adapted from Merriam (2009, p. 88)

Adapting from Miles and Huberman (1994, pp. 10-11 cited in Baqi, 2014, p. 65), the procedure of collecting the data is (1) Deciding on research participants, (2) collecting the data by using observation and interview, (3) Coding the data and categorizing them based on the theme, (4) presenting data using chart to make readable, (5) Concluding the data, and (6) reporting.

To make this study trustworthy, I used three strategies for making it valid and reliable, they are triangulation, member check, and thick description.

RESULT AND DISCUSSION

Participants of this research were thirty-two students at Daarul Qur'an of Senior High School. 6,3% or 2 of them are tenth graders, 65,5% or 21 of them are eleventh graders, and 28,1% or 9 students are twelfth graders.

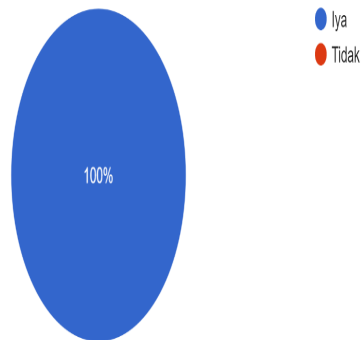
Based on the data collection of research participants, the findings of this study are (1) the role of technology in the learning process, (2) technology tools, (3) the purpose of using technology, (4) the duration of using technology, (5) positive impact of technology, and (6) negative impact of technology.

The role of technology in the learning process

Chart 1. The role of technology in the learning process

Apakah teknologi berperan penting dalam proses belajar?

32 jawaban



Source: research findings

This chart shows that all of the participants agree that technology improves students' learning process. By using technology, students easy to access and enrich the information they need. It indicated that although they live with limited access to the internet, the importance of it cannot be separated from their learning process needs. This finding is in line with the recent study that digital technology integrated with human life, including education. (Haddock et.al., 2022, p. 1)

Technology tools

The participants who are allowed to bring technology devices such as laptops and earphones are only learners who have highly necessary functions such as online courses, art shows, or *pesantren* needs. Based on the data, the most technology tool used by them is a learning website. While, other technology tools such as youtube, social media, or Excel are rarely used.

The purpose of using technology

Students have a purpose for accessing technology. The participants have different aims in getting it. The purpose of using technology is learning. Getting more information on learning resources. Learning with unlimited access. For twelfth graders, technology helps them to explore information about the university. Also, they want to get new information. For other graders, they want to get additional knowledge outside the textbook.

Duration of using technology

Because of the limitation of accessing the technology, the duration of using technology devices is very low. Most of them spent zero minutes per day. Some of them are ten to thirty minutes. Participants who access it are only students who have the necessary.

Positive impact of technology

The importance of technology gives a positive impact on the *pesantren* students. Most of them agree that technology makes them easy to find the information they need. The information on technology helps students to create creative activities in *pesantren*. They live in the dormitory where far away from their parents. Technology gives the opportunity to connect them with their parents. The other positive impact of using technology is knowing the latest news. Then, open-minded and knowing the development of technology. A few of the participants stated that technology gives less benefit, because of rarely using it.

Negative impact of technology

Technology also has a negative impact on students. In physical health, the

overuse of technology caused bad effects such as radiation, eye minus, insomnia, bad sleeping quality, and addiction. Using technology in the classroom caused increasing screen time for students as Strom's statement in his thesis that implementation of new technologies into the classroom will increase students' screen time in a day (2021, 21). In addition, to the negative effects of technology on social life, all of the participants agree that the overused of technology caused humans to be individual's person who rarely makes communication with others face-to-face.

the unique finding in this study is the participants do not feel the negative effect of technology because not all students are allowed to bring their technology devices. Although they access the internet, they have the imitation time by the system of *pesantren*.

Based on the findings above, it will be better if the school provides technology devices to enrich their knowledge under the responsible of their teachers. The limitation of using technology devices gives a positive impact than a negative impact on students such as avoiding hoax news, creating critical thinking, improving students' creativity, focusing on their real activity, and developing self-ability.

CONCLUSION

Based on the process of analyzing data in this study, there are five conclusions of this research. First, 100% of participants agree that technology has an important role in the learning process. Second, the learning website is a technology tool accessed by students. Most students used technology

to enrich their learning knowledge. Third, the duration of accessing technology is very low. It is about zero until thirty minutes per day. Fourth, Technology helps students in getting unlimited knowledge they need easily and quickly, especially knowledge outside the textbook. Last, Participants do not feel the bad effect of technology because of the limitation of accessing them.

REFERENCES

- Alhumaid, K. (2019). Four Ways Technology Has Negatively Changed Education. *Journal of Education and Social Research*, 9, pp. 10-20.
- Baqi, F. A. (2014). Employing Question-Answer Relationship (QAR) Strategy to Improve Students' Reading Comprehension (A classroom action research at the eleventh-year students of SMA Negeri 1 Rangkasbitung in 2012/2013 academic year). (*thesis*). Islamic State University Syarif Hidayatullah, Jakarta.
- Carstens, K. J., Mallon, J. M., Bataineh, M., Al-Bataineh, A., (2021). Effects of Technology on Student Learning. *The Turkish Online Journal of Education Technology (TOJET)*, 20, pp. 105-113.
- Haddock, A., Ward, N., Yu, R., O'Dea, N. (2022) Review Positive Effects of Digital Technology Use by Adolescents: A Scoping Review of the Literature. *International Journal of Environmental Research and Public Health*, 19, pp. 1-17.
- Homaid, A. A. (2022). Problematic Social Media Use and Associated

Consequences on Academic Performance Decrement During Covid-19, *Elsevier Journal*, 123, pp. 1-8.

Kishore, B. R. R. (2018). A Positive Impact of Using Technology. *Shanlax International Journal of Education*, 6, pp. 26-29.

Merriam, S.R. (2009). *Qualitative Research: A Guide to Design and Implementation. Revised and Expanded from Qualitative Research and Case Study Applications in Education (2nd Ed)*. San Fransisco, US: Jossey-Bass.

Naserieh, F. (2013). The Relationship between Conceptual Learning Style Preferences and Skill-based Learning Strategies (*thesis*). Shahid Beheshti University, Tehran.

Nethra. (2019). Impact of Technology on Education. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 6, pp. 166-169.

Sholehah, M. (2018). Acquiring Arabic Vocabularies through Memorizing Al-Qur'an. *Atlantis Press*, 115, pp. 158-163.

Strom, A. (2021). The Negative Effects of Technology for Students and Educators. (*thesis*). Northwestern College, Iowa.