Technology Support for the Inclusion of Deaf Students in Special School Sukabumi City

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Abstract: The COVID-19 pandemic brought rapid changes in various areas of life, including education and technology. One of the learning media that the deaf can use to improve their ability to compose sentence structures is I-CHAT (I Can Hear and Talk). I-CHAT is a portal that contains applications that function as tools for the deaf in language acquisition. In communicating, mastery of sentence structure is crucial. It is because with the correct sentence structure, other people will better understand what we are talking about, and besides that, communication becomes more effective and efficient. Communication barriers that occur in deaf children are caused by hearing impairment, which ultimately requires deaf children only to use sight to acquire their receptive language. This has an impact on the acquisition of imperfect or partial deaf children's receptive language because not everything they see can be understood. Therefore, if a deaf child makes a sentence, the sentence structure is sometimes wrong. This research aims to determine the use of I-CHAT in the preparation of sentence structures for deaf students at Inclusive School Sukabumi City. This research is experimental with a quantitative approach. The results of the research show that the use of I-CHAT can improve the ability to compose sentence structures for deaf children in Special School Sukabumi City.

Keywords: Education Technology; I-Chat; Sentences; Deaf Students; Covid-19.

INTRODUCTION

The COVID-19 pandemic has changed almost the entire order of people's lives in parts of the world. Many driving sectors are no longer able to operate optimally. One of them is in the education sector. Based on WHO and PHEOC data sources from the Ministry of Health, as of June 2021, it is stated that the global situation of the total confirmed cases of COVID-19 in the world is 176,303,596 cases with 3,820,026 deaths (CFR 2.2%) in 222 affected countries and 149 community transmission countries, while the situation in the Government of the Republic of Indonesia has reported 1,937,652 people confirmed positive for COVID-19 and there have been 53,476 deaths (CFR: 2.8%) related to COVID-19 reported and 1,763,870 patients have recovered from the disease (Ministry of Health of the Republic Indonesia, 2021).

In the education sector, the COVID-19 pandemic has affected the method or implementation of education. The COVID-19 pandemic has caused school closures around the world so around 1.5 billion school-age children cannot study in class or participate in classroom-based learning (Unicef Indonesia, 2020). The implementation of education has changed drastically; in its implementation, it has switched to virtual learning (online learning, e-learning), digital technology (digital learning platforms), and changes that are very fast and sudden, and even unplanned without teacher training, limited internet connection, and proper preparation. Without proper preparation, student learning is not optimal, and even learning outcomes have decreased drastically. This is a challenge in itself for the government, community, and schools, where a form of reflection of the challenges of education during the COVID-19 era is allowing educational units to use an emergency curriculum, involving the role of parents and teachers guiding learning children

from home, digitization and integration of information technology in the education delivery system and learning practices, literacy becoming a community movement, and flexibility in learning, namely paying attention to the readiness of educational units and regional conditions.

The COVID-19 pandemic has brought rapid changes in various areas of life, including education. Because it forces everyone to learn adaptively, one of which is through digital technology. There has been an extraordinary acceleration in the use of digital technology in the world of education during the pandemic. For this reason, technology was raised as one of the priority issues in the 2022 G20 Education and Culture Forum. (Gunawan and Amaludin, 2021) stated that technology is expected to be the answer to problems of access, quality, and social justice in the education sector.

To support learning, educational technology adheres to six approaches, namely: (1) Isomeristic; in the form of combining various studies or scientific fields (system theory, psychology, communication, informatics, economics, management, engineering, etc.); (2) Systemic and systematic; by looking at something as a whole, sequentially, and directed to solve problems, (3) synergistic, which guarantees added value from the overall activity compared to when the activity is carried out separately, (4) Effectiveness and efficiency: by utilizing resources that are deliberately developed and available resources, (5) Productivity: by providing additional input or new input, replacing the old with increased results, (6) Innovative: by examining the problem holistically and then looking for answers, something new that didn't exist before (Adedoyin and Soykan, 2020).

The development of information and communication technology, especially English learning media, is currently quite rapid, with the existence of various applications that can be downloaded and used in the teaching process in schools. Teachers who are facilitators in the classroom need to learn to use a variety of applications to adapt to change. When the pandemic occurred, a shift in the way of teaching and the media used in learning English developed with the use of technology in the form of applications that are capable of being solutions for the continuity of the learning and teaching process. Teacher skills in using technology are job demands that need to be developed and trained continuously so that teachers can adapt to the latest situations in the world of education while helping students to have knowledge and skills about technology and its use (Szeto et al., 2016).

According to (Rosyidi, 205:2023) one of the education systems in Indonesia is inclusive education. Through integration, this approach ensures that people with exceptional needs have equal access to education. To manage the inclusive education system, the Indonesian government has regulations that are detailed in "Regulation of the National Education Ministry of the Republic of Indonesia" Number 70 Year 2009 (Ediyanto et al., 2017). Inclusive education is an educational system that allows all learners with disabilities and/or giftedness to engage in education or learning in an educational setting alongside other learners. Inclusive education policies and practices are also consistent with the push to implement the ideal of education for all (Ediyanto et al., 2022). Meanwhile, according to Ediyanto et al (2023:1), Inclusive education is a type of educational service that allows students with special needs to attend conventional schools alongside their peers.

Education is an effort to create a complete human being by developing the potential that exists in him so that he has religious and spiritual strength, personality, self-control, intelligence, noble character, and the skills he has. Currently, many regular schools provide opportunities for children with special needs to attend joint education classes with other students in inclusive schools. An inclusive school is a place where every student can be accepted as part of the class and help each other with teachers and peers so that their

individual needs can be met (Haenudin, 2013). In the inclusive school itself, all children with special needs learn together with other students in the class, regardless of the child's characteristics. One example is deafness. Deaf children are children who experience disorders or damage to one or more of the outer ear organs, middle ear organs, and inner ear organs caused by disease, accidents, or other unknown causes so that these organs cannot carry out their functions properly (Erna et al., 2020). Furthermore, (Atmaja, 2018: 23) says that a deaf person is someone who experiences a deficiency or ability to hear either partly or wholly caused by the failure of some or all of the hearing aids so that he cannot use his hearing aids in everyday life, which impacts language skills as a very important communication tool.

According to (Saptari et al., 2022:258) speech and language development are tightly tied to auditory acuity, whereas children with hearing impairment do not experience the sound-imitating phase following the palpation phase since they cannot hear properly and only mimic visually. Every language has certain rules, regarding sound, form, and sentence structure. It is important to master the rules of the language so that there is agreement among fellow language users, thereby avoiding mistakes in their use. The rules in language are called grammar, and one of the sub-discussions of grammar, in this case Indonesian, is the field of syntax, or sentence structure. "Syntax is part of grammar that studies the basics and processes of forming sentences in a language" (Keraf, 2005: 137). The syntax has several aspects of discussion, one of which is sentence structure.

Deaf children are children who experience a deficiency or loss of hearing ability either partially or completely due to the failure of some or all of their hearing devices, so they cannot use their hearing aids in everyday life. Deaf children experience hearing loss both in the womb and after birth. The cause of hearing impairment can be due to sensory abnormalities of the sensory organs, motor abnormalities, or neurological or sensory abnormalities (Nugraha, 2022).

Sentences written by deaf children are difficult to understand because the sentences are often unstructured, or even the sentence structures are often reversed. In communicating, mastery of sentence structure is essential because, with the correct sentence structure, other people will better understand what we are talking about. In addition, communication becomes more effective and efficient. The explanation above reminds us how important it is to master sentence structure and pattern in the communication process because, by using the correct sentence structure and pattern, the message conveyed will be easy to understand and the communication process can run effectively and efficiently. The impact of deafness causes the ability of deaf children to convey their language both verbally and non-verbally to be imperfect and difficult for hearing people to understand.

The urgency of this research was that students at Inclusive School Sukabumi City often make mistakes in constructing sentences, and the learning media used in language learning is not yet effective, so it is necessary to increase the ability of deaf children to construct sentences using I-CHAT learning media. Based on the description of the background above, problems can be identified as follows: How is the influence of using I-CHAT in the preparation of sentence structures for deaf students at Special School Sukabumi City?

LITERATURE REVIEW
I-CHAT (I Can Hear and Talk)

According to (Dewanti et al, 2020) The I-CHAT (I Can Hear and Talk) app is a learning app using computer-based sign language designed for Children who have a hearing loss or are visually impaired which is packaged in the form of multimedia. I-CHAT is a learning medium in the form of an application specifically designed to help the community, especially deaf children and teachers in special schools, learn languages. This application is programmed by PT. Telkom Indonesia, which is working with Universitas Pendidikan Indonesia (UPI) and Special Schools Cicendo, focuses on composing structured sentences for deaf children. This application, which was developed in 2009 and contains various modules, can be used on a computer or laptop in online or offline modes. This medium is intended for deaf children who experience language barriers, such as poor vocabulary, an inability to construct sentences, or an inability to solve math problems easily. According to (Azizah, 2022), in the I-CHAT application, there is a lot of emphasis on the interaction between the user and the models in the video. This will make it easier for deaf children to understand and practice the language they have received and mastered. According to (Maulidiyah, 2020), I-Chat is a learning application that uses sign language based on software technology that has been specially designed so that it can be used by the deaf. This application is not only used for the implementation of learning but can be used by anyone who needs it. The I-Chat application is also available in Indonesian and Malay sign languages. In addition, deaf people can use hearing aids as hearing aids for deaf people who still allow them to hear sounds.

Education Technology

According to (Yusufhadi, 2016), historically, the field of educational technology was born in the United States, which at that time was involved in World War II, so it required military personnel who were skilled in operating war equipment and therefore needed effective training. The training was then developed by utilizing various media and simulators to improve the performance of military personnel, which became known as performance technology. At that time, the development of technology was closely related to the development of science and technology, which were used to realize effective and efficient learning activities.

Technology is the result of scientific developments that are used to solve problems efficiently and effectively so that they can bring about changes in society in terms of knowledge, attitudes, and behavior (Anglin, 1995). While the term learning according to (Driscoll, 2000:354), is an "arrangement of learning conditions" which later by (Reighlulth, 2009, p. 6) called "anything that is done purposefully to facilitate learning". So learning is all the effort that is made consciously and planned to create learning conditions for students (Gasong, 2018). Learning technology is a term that is often used to identify any hardware or software technology used in learning (Smaldino et al., 2008). Furthermore, learning technology is theory and practice in the design, development, utilization, management, and evaluation of processes and resources for learning.

Historically, learning technology has undergone locus and focus updates through definitions in 1963, 1972, 1977, 1994, and 2008 by AECT (Association of Educational Communication and Technology) so that it is always relevant to the times (Yaumi, 2016). This field of study has a domain or area that includes design, utilization, development, management, and evaluation as a dividing line from other fields of study (Rusydiyah, 2019). Learning technology can be seen as a process and a learning aid; therefore, the study includes distance learning, learning resources, instructional design, media, methods,

and learning strategies (Smaldino et al., 2008). Today, the role of learning technology is felt to be very important because it can accelerate the expansion and equity of access to learning and education, especially during the COVID-19 pandemic (Moller et al., 2009).

In applying technology as a learning medium for children with special needs, consideration is needed in choosing the technology to be used. This is because children with special needs certainly have different characteristics from one another. Differences in the characteristics of children with special needs can be seen in terms of physical, mental, emotional, social, and intellectual abnormalities. With the right balance of the use of technology by the characteristics of children with special needs, technology can be used as a learning tool or medium that can produce effective and efficient learning activities. By introducing technology to children with special needs, technology can support the teaching and learning process and can also make it easier for educators to deliver learning material (Aldryan & Amini, 2020).

Sentence Structure and Patterns

(Tarigan, 2008) states that sentence structure is a branch of grammar. The meanings of the words in the sentence have a relationship to form a correct Indonesian sentence structure. Mastery of sentence structure is important to have because the understanding or idea that the author will put forward can only be known after it is poured into a sentence. A sentence will have meaning if the pattern is arranged properly. A sentence is a combination of two or more words that produce a meaning and final intonation pattern. The various basic patterns in sentences are: a. The subject (S) is the part of the sentence that becomes the subject of discussion; b. The predicate (P) is the part that explains, mentions, or explains the subject; c. The object (O) is the part that completes the sentence. d. Information (C) explaining the place, time, and others. A writing skill is the ability to use written language patterns to express an idea or message. (Tarigan, 2008) reveals that writing is a language skill that is used to communicate indirectly. He further emphasized that writing depicts graphic symbols that describe a language that is understood by someone so that other people can understand the language.

METHOD

This research used a quantitative approach, The type of research used experimental methods. Experimental research is research that is used to find the effect of certain treatments on others in controlled conditions; controlled conditions are meant to mean that the results of the research are converted into numbers, and the analysis used is statistical analysis (Sugiyono, 2013: 72). The research design used was Matching Pretest post-test control group design, namely types of experiments that were considered good because they met the requirements, namely other groups that were not subject to experiments and also received observations (Arikunto, 2007: 78).

The population in this study was 10 deaf students in class X at Special School Sukabumi City. To determine the sample in this study, a non-probability sampling technique was used, namely a sampling technique that does not provide equal opportunities for each element or member of the population to be selected as a sample (Sugiyono, 2013). In this nonprobability sampling technique, the researcher uses saturated sampling, where all members of the population are used as samples. Data analysis techniques used in this research are quantitative descriptive data analysis, namely analysis using numbers and description of research results. Conclusions are made by hypothesis testing which is based on the description of the results research, by comparing average post-action test results with pre-test action, and whether there is an improvement in students' ability to compose

sentences after given learning by using I-CHAT learning media. The test used in data collection is a written test. In the pre-test activities, students are asked to make structured sentences according to a predetermined pattern written on the piece of paper provided. In the post-test activities, students are asked to make structured sentences according to the pattern determined by using I CHAT learning media.

RESULT AND DISCUSSION
Result

Based on the results of the research that has been done, data can be obtained as follows:

Table 1. The result of the pretest and posttest activities

No	Sample	Sentence Pattern Score					
		Subject -Verb -Object (SVO)		Subject -Verb Complement (SVC)		Subject -Verb-Adverbial (SVA)	
		Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
1	DN	18	24	19	23	12	24
2	KF	27	31	1	25	31	31
3	SB	15	17	1	23	7	29
4	SF	27	29	25	31	28	31
5	JN	9	17	1	23	1	20
6	AS	17	23	19	21	19	25
7	SD	27	32	2	25	31	32
8	DF	15	17	1	23	7	29
9	GT	27	29	25	31	27	32
10	HY	8	17	2	21	2	19

The table above is the result of the pretest and posttest activities carried out in constructing sentence patterns using I-CHAT learning media.

From the table above, it can be seen that, in general, in making structured sentences with the three sentence patterns, the ability of the sample after being given treatment experienced a significant increase.

Based on the table it can be seen that when making sentences with patterns there has been an increase in the Subject - Verb - Object (SVO) pattern, although the change has not yet been that way significant.

Based on the table above, it can be seen that there is a fairly large difference between the pretest and posttest scores. It shows that there is a significant increase in the production of structured sentences with the Subject -Verb Complement (SVC) pattern.

From the table above, it can be seen that in making sentences structured with patterns Subject -Verb-Adverbial (SVA) has increased quite significantly. In general, in making structured sentences with these three sentence patterns sample ability after given treatment experienced a significant increase. In the Subject - Verb - Object (SVO) sentence pattern, the lowest score during the pretest was 8 and the highest score was 27. After being given treatment, the score obtained during the posttest was carried out being 17 for the lowest score and 32 for the highest score.

In the Subject -Verb Complement (SVC) sentence pattern, the lowest score obtained during the pretest was 1 and the highest was 25. The score obtained when the posttest was carried out was 21 for the lowest score and 31 for the highest score. While in the Subject -Verb-Adverbial (SVA) sentence pattern, when the pretest was carried out, a score of 1 was obtained for the lowest score and 31 for the highest score. After the treatment was carried out, the scores obtained during the posttest obtained a score of 19 for the lowest score and 32 for the highest score.

The ability to make sentences for deaf students in class X at Special School Sukabumi City. after its implementation Language learning using I-CHAT has increased from the pretest to Posttest. Before being given lessons using I-CHAT learning media, deaf students have limitations in constructing sentences correctly, especially in assembling the word structures Subject -Verb -Object (SVO), Subject -Verb Complement (SVC), and Subject -Verb-Adverbial (SVA), which correspond to good and correct language structures. This deficiency in deaf students can be seen from the results of the pretest because of the incompatibility of the sentence structures composed by deaf students. This proves that deaf students need improvement and learning in terms of constructing sentences using appropriate and effective learning media, namely I-CHAT.

Discussion

Based on the results from the data processing carried out, it can be seen that the posttest results are greater than the pretest results. This shows an increase in value acquisition and income assumed to be a result of the treatment that has been given. By the results of hypothesis testing, it is known that media use of I-CHAT has a significant effect in improving the ability to make sentences in deaf children.

The use of I-CHAT learning media in this research places more emphasis on aspects of practice making structured and patterned sentences, where deaf children are trained to arrange words. By being given practice in constructing structured sentences and patterns in deaf children, the ability to make sentences in children is expect deafness will increase. Finally, children become more adept at communicating with children deaf and hearing people using writing via computer, mobile phone, or other writing.

CONCLUSION

In the world of special education, there are 4 important components, one of which is: is the use of tools or media to make things easier for children with special needs to carry out daily activities. The technology used by children with special needs learning certainly has differences from the tools used by normal students. Before using technology as a learning medium, the technology has gone through several stages before it can be used. By using assistive technology is expected for students to be able to follow learning easily, safely, and independently.

Based on the results of problem discussion, data processing and analysis as well as hypothesis testing can be concluded that the use of I-CHAT learning media in this research is effective and has a significant effect on increasing children's ability to make sentences. Increased ability to make sentences in deaf children after given learning using I-Chat learning media, especially in sentences that use the Subject -Verb -Object (SVO), Subject -Verb Complement (SVC), and Subject -Verb-Adverbial (SVA) patterns. These three sentence patterns do not all experience significant increases.

Teachers should use this research as input and material considerations in teaching deaf children. Learning media plays an important role. One media that can be used is I-CHAT. The use of I-CHAT media and Indonesian language learning media for deaf

children needs to be considered to help improve language skills, especially in making structured and patterned sentences, as a prerequisite for writing skills. Apart from that, all teachers who teach deaf children, though not teaching Indonesian language studies should always be consistent using patterned sentence structures to strengthen their language skills.

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REFERENCES

Adedoyin, O. B., dan Soykan, E. (2020). Covid-19 Pandemic and Online Learning: The Challenges and Opportunities. Interactive Learning Environments 0(0): 1–13. https://doi.org/10.1080/10494820.2020.1813180.

Aldriyan, A. A., & Amini, S. (2020). Penerapan Metode Marker Based Tracking Untuk Pembelajaran Anak Berkebutuhan Khusus [Application of the Marker Based Tracking Method for Learning Children with Special Needs]. Skanika, 3(4), 1–6.http://jom.fti.budiluhur.ac.id/index.php/SKANIKA/article/view/2206/1097

Anglin, G. J. (1995). Instructional technology: Past, present, and future. ERIC.

Arikunto, Suharsimi. (2007). Prosedur Penelitian Suatu Pendekatan Praktik [Research Procedures a Practical Approach]. Jakarta: Rineke Cipta.

Atmaja, Jati Rinakri. (2018). Pendidikan dan Bimbingan Anak Berkebutuhan Khusus [Education and Guidance of Children with Special Needs]. Bandung: PT Remaja Rosdakarya.

Azizah, I. (2022). Metode Pengajaran Anak Berkebutuhan Khusus Di Sekolah Luar Biasa (SLB) [Teaching Methods for Children with Special Needs in Special Schools (SLB)]. Jurnal Pendidikan, 11(1), 54–63. DOI: http://dx.doi.org/10.29406/jpk.v11i1.1953

Dewanti, P., Indriyani, I., & Vishnu Vedamurthi, K. (2020). Pengenalan Aplikasi Pembelajaran Bahasa Isyarat i-Chat untuk Anak Berkebutuhan Khusus di Panti Asuhan Semara Putra Klungkung [Introduction to the i-Chat Sign Language Learning Application for Children with Special Needs at the Semara Putra Klungkung Orphanage]. *WIDYABHAKTI Jurnal Ilmiah Populer*, *2*(3), 1-6. https://doi.org/10.30864/widyabhakti.v2i3.190

Driscoll, M. P. (2000). Psychology of Learning for Instruction (2nd ed.). Pearson Allyn and Bacon Boston.

Ediyanto, E., Atika, I. N., Kawai, N., & Prabowo, E. (2017). Inclusive education in Indonesia: From the perspective of widyaiswara in centre for development and empowerment of teachers and education personnel of kindergartens and special education. *Indonesian Journal of Disability Studies* 4(2), 104–116. https:// doi.org/10.21776/ub.IJDS.2017.004.02.3

Ediyanto, E., Setiawan, A., Handaka, I. B., Rofiah, N. H., & Suhendri, S. (2022). Implementation of Inclusive Education in Learning Process at Senior High School Malang City, Indonesia. Indonesian Journal of Disability Studies, 8(1), 179–189. Retrieved from https://ijds.ub.ac.id/index.php/ijds/article/view/295

Ediyanto et al. (2023). The Problems in the Implementation of Inclusive Education in Primary Schools. Journal of ICSAR, [S.l.], v. 7, n. 1, p. 1-9, jan.doi:http://dx.doi.org/10.17977/um005v7i12023p1.

Erna, J., Endah P., Melawati., & Yuni, S. (2020). "Implementasi Pendidikan Karakter Pada Disabilitas Anak Tunarungu." [Educational Implementation Characteristics of Deaf Children with Disabilities]. *Jurnal Golden Age* 4, no. 01, 12–19. DOI: https://doi.org/10.29408/goldenage.v4i01.1809

Gasong. (2018). Belajar dan Pembelajaran [Learning and Studying]. Deepublish.

Gunawan, Y. I. P., & Amaludin, A. (2021). Pemanfaatan teknologi pembelajaran dalam jaringan di masa pandemi covid-19 [Utilization of online learning technology during the Covid-19 pandemic]. *Madaniyah*, *11*(2), 133-150.

Haenudin. (2013). *Pendidikan Anak Berkebutuhan Khusus Tunarungu* [Education of Deaf Children with Special Needs]. Jakarta: PT. Luxima Metro Media.

Kemenkes RI. (2021). Infeksi Emerging: 1.https://infeksiemerging.kemkes.go.id/situasiinfeksi-emerging/situasi-terkini-perkembangan-coronavirus-disease-covid-19-17 juni-2021.

Keraf, Gorys. (2005). Diksi dan Gaya Bahasa [Diction and Language Style]. Jakarta: PT Gramedia Pustaka Utama.

Maulidiyah, F. N. (2020). Media Pembelajaran Multimedia Interaktif Untuk Anak Tunagrahita Ringan [Interactive Multimedia Learning Media for Mildly Mentally Impaired Children]. Jurnal Pendidikan, 29(2), 93–100. https://doi.org/10.32585/jp.v29i2.647

Moller, L., Huett, J. B., & Harvey, D. M. (2009). Learning and Instructional Technologies for 21st Century.

Nugraha, Deden & Hermina, Nurul. (2022). The effect of Edmodo based English learning to support students with hearing loss during the COVID-19 pandemic. International journal of health sciences. 2275-2284.10.53730/ijhs. v6nS7.11852.

Reighlulth. (2009). Interactional Design Theories and Models (3rd ed.). Routledge.

Rosyidi, Rizky Amalia. Inclusive School Policies: A Literature Study of Implementation Dilemmas. Journal of ICSAR, [S.l.], v. 7, n. 2, p. 205-211, july 2023. ISSN 25488600. doi: http://dx.doi.org/10.17977/um005v7i22023p205.

Rusydiyah, E. Df. (2019). Teknologi Pembelajaran (1st ed.) [Learning Technology (1st ed.).] UIN Sunan Ampel Press.

Saptari, Wina Try; Susetyo, Budi; Tarsisi, Iding (2022). Improving the Articulation Ability of Children with Hearing Impairment Using Role Playing Method. Journal of ICSAR, [S.l.], v. 6, n. 2, p. 258-264, july doi: http://dx.doi.org/10.17977/um005v6i22022p258.

Sugiyono. (2013). Metode Penelitian Kuantitatif, Kualitatif dan R&D [Quantitative, Qualitative and R&D Research Methods]. Bandung: Alfabeta.CV.

Smaldino, S. E., Lowther, D. L., Russell, J. D., & Mims, C. (2008). Instructional technology and media for learning.

Szeto, E., Cheng, A. Y. N., & Hong, J. C. (2016). Learning with social media: How do Preservice Teachers Integrate YouTube and social media in Teaching? *Asia-Pacific Education Researcher*. https://doi.org/10.1007/s40299-015-0230-9

Tarigan, H.G. (2008). Membaca Sebagai Suatu Keterampilan Berbahasa [Reading as a Language Skill]. Bandung. Angkasa.

Unicef Indonesia. (2020). COVID-19: Laporan Baru UNICEF Mengungkap Setidaknya Sepertiga Anak Sekolah Di Seluruh Dunia Tidak Dapat Mengakses Pembelajaran Jarak Jauh Selama Sekolah Ditutup." [New UNICEF Report Reveals At Least One-Third of School Children Around the World Cannot Access Distance Learning During School Closure."]. Kampanye Reimagine: 1. https://www.unicef.org/indonesia/id/press-releases/covid-19-laporan-baruunicef-mengungkap-setidaknya-sepertiga-anak-sekolah-di-seluruh.

Yaumi, M. (2016). Terminologi Teknologi Pembelajaran: Suatu Tinjauan Historis [Learning Technology Terminology: A Historical Overview]. Jurnal Inspiratif Pendidikan, 5(1), 191–208. DOI: https://doi.org/10.24252/ip.v5i1.3471

Yusufhadi, Miarso. (2016). Menyemai Benih Teknologi Pendidikan [Sowing the Seeds of Educational Technology]. Jakarta: Prenadamedia Group.