How to Cite:
Rahmatullah, A. S., Mulyasa, E., Syahrani, S., Pongpalilu, F., & Putri, R. E. (2022). Digital era 4.0: The contribution to education and student psychology. *Linguistics and Culture Review*, *6*(S3), 89-107. https://doi.org/10.21744/lingcure.v6nS3.2064

Digital Era 4.0: The Contribution to Education and Student Psychology

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***Abstract*---**This study aims to explain the challenges of teachers in the digital era 4.0 and readiness to face these challenges. Through literature review. The author explains that there are several ways to face challenges education in the era of the industrial revolution 4.0 through capacity building and teacher skills by playing an active role in school. In addition, this research is to see the role of digital in education and student psychology. This research is a descriptive qualitative research. Data was collected by means of observation, interviews, and giving a questionnaire. The analysis technique uses interpretive analysis of the results of activities based on instruments. The results showed that the digital era 4.0 considered important for teachers to master in the 21st century, including the ability of teachers to use digital-based learning media. While the teacher develops psychology, namely the ability to creativity, critical thinking, collaboration, communication, innovation, problem solving, ICT skills, and character.

***Keywords*---**digital era 4.0, education, ICT, psychology, student.

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Manuscript submitted: 09 Sept 2021, Manuscript revised: 18 Nov 2021, Accepted for publication: 27 Dec 2021

Introduction

In the modern era of the Industrial Revolution 4.0 today, almost all activities of human life cannot be separated from the use of information technology as an enabler for other activities and services. The use of Information Technology is no longer just a tool but a mandatory component that must be owned. The development of Information Technology which greatly facilitates the activities of human life has led to a very high dependence on the existence of information technology. Information Technology is a technology used to manage data and information, including processing, obtaining, compiling and storing and manipulating data in various ways to produce quality information, namely information that is relevant, accurate and timely, which is used for personal purposes, business, and government will even be in the form of strategic information in decision making in an agency (Badri et al., 2018; Li et al., 2020).

In the implementation of education by a modern educational institution at the level of a world class university, the use of information technology has become an obligation considering that the implementation of education in the context of public services requires good governance that will ensure transparency, accountability, efficiency, and effectiveness of education. The seriousness of management is what underlies the application of information and communication technology in the implementation of all educational activities because of the awareness of the importance of information and communication technology (ICT) which is one of the main pillars of the development of human civilization today and is an important means in the process of transformation into an advanced nation and that technology Information and communication also has a big role in the welfare of the nation's life, with the existence of information and communication technology, it will increase the ability to encourage the creation of national independence and increase national competitiveness (Psacharopoulos, 1994; Calderhead, 1989).

The development of information and communication technology allows and makes it easier for humans to be able to communicate with each other quickly, easily and affordably. Information from other parts of the world can easily be received quickly, communication activities between two far apart places become easier and faster with easy to use communication and communication technology tools. In the field of education, the development of information and communication technology has the potential to build a democratic society, this is indicated by the relationship between teachers and students, teachers and teachers, and between teachers, students, parents and the community in relation to the educational process inside and outside school. The development of information and communication technology not only has a positive (constructive) effect, but also has a destructive (destructive) negative effect. The negative effect is caused by the development of faith and piety (IMTAQ) not in line with the development of science and technology (IPTEK). Mastery of science and technology is even used to explore honest procedures so that cyber crime (credit card piracy) was born. In addition, the mastery of science and technology is instead used to satisfy worldly desires so that cyber porn is born (the spread of sexual deviation activities in the form of text, images, and audio-visuals) (Ghavifekr et al., 2013; Cardona et al., 2013).

Information technology has developed rapidly and is becoming more and more easily accessible to the public. Currently the information has spread through various media, both print media (newspapers and magazines), as well as electronic media, such as television and the internet. In the past ten years, the number of users Internet (netters) in the world has increased dramatically. Year 2000 user growthThe world's internet increased by an average of 2% of the total world population. From 0.4% of users of the entire world population, now up almost 60 times in 2008 (Stats, 2008). Ironically, not all residents can access the internet so that there is a gap in information technology. Penetration internet is only 23.3% or about 1.5 billion of the total populationThe world population is estimated to be around 6 billion people (Internet World Stat, 2008). The digital revolution and the era of technological disruption are other terms for the industry 4.0 (Ustundag & Cevikcan, 2017; Sholihin, 2019). Called the digital revolution because of the proliferation of computers and automation records in all areas. Industry 4.0 is said to be the era of technological disruption because automation and connectivity in a field will make the world move industry and job competition become non-linear. One of the unique characteristics of Industry 4.0 is the application of artificial intelligence or artificial intelligence (Puncreobutr, 2016; Setiawan, 2019; Robandi et al., 2018; Halili, 2019). One form of this application is the use of robots to utilize human labor more cheaply, effectively and efficiently.

Industry 4.0 as a phase of the industrial revolution changes the pattern of human life in the scale of the scope, complexity, and transformation of life experiences before. Humans will Raman & Rathakrishnan (2019); Muktiarni et al. (2019); Qureshi et al. (2021), even live in uncertainty (uncertainly) global, therefore humans must have a response that is the ability to predict a very fast-changing future. The response with involving all global political stakeholders, from the public sector, private sector, academia, to civil society so that the challenges of industry 4.0 can be managed into opportunities. Irianto in simplifies challenges (Ghavifekr & Wong, 2022; Shahroom & Hussin, 2018; Karim & Fauziyah, 2018). The 4.0 industrial revolution, namely; (1) industrial readiness; (2) reliable workforce; (3) ease of socio-cultural arrangements; (4) diversification and job creation. Then the industry 4.0 opportunities are; (1) ecosystem innovation; (2) industrial base; (3) investment in technology; and (4) integration of Small and Medium Enterprises (SMEs) and entrepreneurship (Prestiadi et al., 2019).

In the era of the development of the industrial revolution 4.0 Tiwari & Khan (2020); Ghani & Muhammad (2019); Soldatos et al. (2019), it provides challenges for world of education in aligning characters based on local wisdom, so that culture is not eroded by technological sophistication is determined by the discipline every citizen who complies with the laws and regulations and customs and customs that apply, with the discipline of the regulations legislation is very much determined by the elements of morals, norms, ethics and manners of every citizen. According to Railton (2003); Jubb & Rossi (2015); Serramia et al. (2018), moral those are the values and norms that become the guideline for a person or group in regulating their behavior, norms or values in morals other than as a normative standard for measuring behavior as well as the command of a person or group. According to Cobb et al. (2003) ethics is philosophy or critical thinking and about the teachings, norms, values and customs habits and moral views critically.

The burden of teachers is getting heavier Weitzenhoffer & Hilgard (1962), when compared to before the Law law and lecturer. Teachers are responsible for bringing their students to reach maturity as a future leader of the nation in all fields life (de Vocht et al., 2017; Deng, 2018; Ali, 2014). Interested parties should not ignore the role of teachers and their professions, so that the nation and state can grow in parallel with other nations in developed countries, both now and in the future which will come (Hargreaves & Fullan, 2015; DeBoer, 2000; Merryfield, 2000). With the task of implementing professional teachers can realize the existence of a nation and state that is meaningful, honorable and respected.

Currently, Duke (1984); Cooper & Travers (2012); McAllister (2005), the teaching profession is also faced with increasing challenges complex, along with changes in people's perspectives consciously influenced by the doctrine of legal protection of children, including students. But on the other hand, legal protection against the teaching profession is also considered. Lately, social media is often crowded by being reported by Roberts & Bucksey (2007), a teacher who was reported by students to parents of students for violating some physical violence against educators, as well as news that have been persecuted and ganged up learners (White, 2010; Horton et al., 1990). Teachers are seen as one of the factors that can harmonize character based on local wisdom, so that culture is not eroded by sophistication technology (Haines & Sharif, 2006). Teachers are professional educators with the main task educate, teach, guide, direct, train, assess, and evaluate students on the formal education path (Mohnsen, 2008; National Research Council, 2001). Professional teachers are teachers who have the skills and abilities qualified, not only an expert but can carry it out well and perfect (Lieberman & Houston-Wilson, 2009). In accordance with Islamic principles, the hadith of the Prophet Muhammad stated: means "If a job is not given to an expert, look at it" destruction".

Professional teachers are formally required to meet the qualifications minimum academic and certified educator. Teachers who meet these professional criteria will be able to carry out their main function effectively and efficiently to realize the educational process and learning to achieve the goals of national education, namely developing the potential of students to become human beings who believe and fear, noble, healthy, knowledgeable, capable, creative, independent, and become citizens a democratic and responsible state. Teachers are one of the main factors for the creation of the nation's next generation quality, not only from the intellectual side but also from the procedures for behaving in society, therefore the task is carried out teacher is not easy, where the teacher is a role model for students in practicing knowledge and good morals that deserve to be imitated learners. Teachers play a very decisive role in the achievement of educational goals because no matter how great and sophisticated social media technology used without being supported by ability teachers or educators in mastering technology will not be able to achieve maximum educational goals for students. As the heavy burden carried by the teacher is mandated by Article 3 of the Law Number 20 of 2003 concerning the National Education System which is a National education has a function to develop skills and form a dignified national character and civilization in the context of educating the nation's life, which aims to develop students to become human beings who believe and fear Allah God

Almighty, noble, healthy, knowledgeable, capable, creative, independent and become a democratic and responsible citizen (Van Raaij, 1981; Ajzen, 1987).

The task of the teacher as a profession requires the teacher to develop self-professionalism according to the development of science and technology. Educating, teaching, and training students is the teacher's job as a profession. The teacher's job as educator is to continue and develop life values to students. School is a place where students spend some of their time and a place that (Light, 2004; Burke & Grosvenor, 2008). It is very appropriate to develop good habits. In carry out self-development that leads to the world of education such as self-ability, respect for knowledge and courtesy are not things. The easy one. The process is not necessarily true students live it and apply it in each individual (Jungers et al., 2012; Holt & Holt, 2005; Fagan, 2003). World education is always challenged by a phenomenon of decline in mind the behavior of some students lately (Deloria et al., 2001; Searle, 1992). With the advancement of science increasingly advanced and sophisticated knowledge and technology resulted in many changes in the education system.

The teacher who is one of the elements of the education staff, a teacher teachers must be able to carry out their duties professionally, always adhere to work ethics, be independent (free from outside pressure), productive, effective, efficient, and innovative, and ready to provide excellent service based on systematic scientific or theoretical principles, professional authority community recognition and a regulatory code of ethics (Holmes & Prieto-Rodriguez, 2018; Jurgena et al., 2015). Besides, teacher professionals are required to have three abilities. First, ability cognitive, meaning that the teacher must master the material, methods, media, and be able to planning and developing learning activities. Second, affective ability, meaning that the teacher has noble character, is awake behavior so that it will be able to become a model that can be imitated by his students. Third, psychomotor abilities, Przednowek et al. (2019), meaning that teachers are required to have knowledge and knowledge in implementing the knowledge possessed in everyday life.

Teacher professionalism has a central and strategic position (Sulisworo et al., 2017). Because position, both from the interests of national education and duties functional teachers, all of which demand that education be carried out professional. The discussion about professional teachers is related to several terms, namely the profession, the professional itself, professionalism, professionalism, and professionalism. Profession is a statement of devotion to a job or position where the job or position requires expertise, responsibility, and loyalty to the profession (Blackmore & Blackwell, 2006). A profession in theory cannot be done by anyone. Professional refers to a person or appearance someone who fits the demands that should be. Professionalization describes the process of making someone a professional through education. Professionalism refers to the degree of one's appearance as a professional or the performance of a job as a profession which concerns the attitude, commitment, and code of ethics of (Finn, 1989). Karseth & Nerland (2007), stated that the position of the teacher, as an element of professional, must be improved and enhanced its role as an agent teaching and learning process at school. This role will also focus on improving the

quality of education at the national level and resources Indonesian people in general.

Method

This research is a transformation research and digitalization in the field of education in the digital era 4.0. This research is qualitative research with analytical techniques descriptive with literature review (library research) which is in process data collection takes various supporting literature references and do not need to go into the field (Flick, 2018). This type of research is research qualitative. Data collection techniques are listen and record information important in conducting data analysis by reducing data, displaying data and the final picture so that get a conclusion in full regarding the study of the literature for developed in this research and to validate the data using triangulation of data sources (Marshall & Rossman, 2014). The data is presented with an interpretative descriptive ethnodigital approach, which focuses on a group of educational units that actively use digital media in education, especially in learning.

The role of psychology in the learning process of students at school. This study uses a literature review method (library research), where the discussion in this study is based on expert opinions and the results of previous research on psychology and the learning process. It can be concluded that the teacher in carrying out his role as an educator for his students, of course, is required to understand various aspects of his own behavior and the behavior of people related to his duties, especially the behavior of students with all its aspects, so that they can carry out their duties and roles effectively, which in turn in turn can make a real contribution to the achievement of educational goals in schools. By understanding the characteristics of students, the teacher will be wise in preparing learning media, the teaching and learning process itself, even in giving assessments (Gilboy et al., 2015; Yunus et al., 2011).

Discussion

Digital era 4.0 transformation in education

The fourth industrial revolution took place in the 21st century, where very rapid technological developments that can increase progress in various parts of the world. Changes in competency demands in the 21st century are marked by utilizing information and communication technology in all aspects life, including in the learning process. In line with demands mastery of these competencies, the ability to think critically, solve problems problems, and collaborating are important competencies in entering 21st century life. As a professional teacher conceptually must have the following conditions: to support them in carrying out their duties and authorities. according to supporting competencies include: having English ability; mastering technology such as computers, internet; and have managerial skills. Argues that in order to facilitate his main task a teacher must have supporting competencies which include: writing skills, researching, foreign language, and the ability to encourage students to read (Vocroix, 2021; Widana et al., 2020).

In addition to the competencies mentioned above, other competencies 21st century which also needs to be owned by a teacher to transfer competence to their students (Rust & Bergey, 2014; White & Chant, 2014). The 21st century competencies include thinking skills, teaching and according to scientific disciplines, utilizing technology, creativity and teamwork (Saavedra & Opfer, 2012). Tican & Deniz (2019) also added problem solving, empathy, effective communication and development sustainable. These competencies are needed to teach and build student strength. 21st century competencies are here to help teachers in teaching and developing student potential, designing interesting learning, building interesting learning, and understanding

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Every teacher in carrying out their duties boils down to the competencies that they control. Apart from being an encouragement to carry out work with optimally is also expected as a guide and consideration in implementing 21st century competency improvements to improve quality expected education. It can be explained that in the 21st century competence It was found that there are six competencies that must be possessed by teachers today, namely: creativity and innovation, communication and collaboration, ICT, critical thinking, character education, and problem solving. The rapid development of information and technology is unavoidableand become an important part of education and learning. Teacher is the essence of education, without teachers education will not run effectively. Many teachers lack experience and/or competence, lack of time, and other technical issues to integrate ICT into the classroom (Honan, 2008; Lei, 2009; Lim et al., 2011; Miskiah et al., 2019; Al-Munawwarah, 2014; Russell et al., 2003). Therefore, the teacher must be able to balance between learning systems and technology that is increasingly growing. Here the teacher must be able to innovate learning from classic to modernization. Combining learning methods with technology, to help students understand that education and technology must be in line and be able to create learning activities in a situation where just. Thus, the learning revolution becomes a necessity (Muzyka et al., 2021; Lukiianchuk A et al., 2021).

Digital era 4.0 in education as a technology-based solution

A call to educators around the world to prepare students for the 21st century has been around for the last few decades (Dede, 2010; Trilling & Fadel, 2012).

Currently we facing the third evolutionary wave in education and requires a clear paradigm (Kennedy et al., 2016). Teachers need to improve their knowledge and skills to explore their teaching practice (Selvi, 2010). Teacher competence serves as an important part that can be used to improve results learning (Kleickmann et al., 2016). This matter in line with the results of research conducted by Kunter, et al (2013) which found that teacher competence was positively related to the quality of teaching, which in turn has an effect on student learning outcomes. However, Along with technological developments, the competencies needed by teachers also changed. First, teachers are expected to be able to use technology to support new ways of teaching and learning (Drent & Meelissen, 2008).

Figure 1. Example of digital era 4.0 transformation

Figure 1 above shows that the digital era 4.0 has entered all sectors of human life. Including the education sector. It is necessary to know that the digital era 4.0 has played an important role in the development and improvement of the quality of education (Bayne-Jardine et al., 2005). For example, the use of media in digitalization-based education certainly makes the learning process easier, both indoors and outdoors (out of the field) from the school area. Thus, digitization is unavoidable (Mead et al., 2017).

In prepare students for the 21st century, teachers must develop literacytechnology for its students (Voogt & Roblin, 2010). Another demand is education teachers who in this case are teachers need to be educated to use technology as a tool for teaching, supporting students' technological literacy, and training is part of the development of teacher professionalism. As a professional teacher conceptually must have the following conditions: to support them in carrying out their duties and authorities. according to Hidayatullah, supporting competencies include: having English ability; mastering technology such as computers, internet; and have managerial skills. Meanwhile, Suyanto & Jihad (2013) argues that in order to facilitate his main task a teacher must have supporting competencies which include: writing skills, researching, foreign language, and the ability to encourage students to read.

The educational philosophy of Ing ngarso sung tulodo, Ing madyo mangun karso, tut wuri handayani from Ki Hajar Dewantara became the inspiration for the Independence Learning program policy rolled out by the Minister of Education

and Culture in 2020. This educational philosophy has the message that the educational environment fosters independence and independence in learning . Merdeka Learning encourages change to determine the best way to apply learning methods. In this context, the use of information and communication technology (ICT) to create various learning innovations that suit the needs of students.

The integration of ICT into the learning process is needed to develop students' higher order thinking skills, develop skills in the field of ICT (ICT Literacy), and to increase the effectiveness, efficiency and attractiveness of the learning process. Therefore, teachers as educators are required to have sufficient skill competencies to utilize existing ICT, so that they are more optimal in delivering subject matter in schools. Permendiknas Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies mandates four competencies that must be mastered by teachers, namely pedagogic, professional, personality, and social competencies. There are 2 (two) competencies related to ICT: 1) pedagogic competence, namely utilizing ICT for learning purposes; and 2) professional competence, namely utilizing ICT to communicate and develop themselves (Ginaya et al., 2020; Nasution, 2018).

Digital era 4.0 in the development of student psychology

Technological advances that are growing rapidly give rise to a new phenomenon in society. This phenomenon is the use of social media in society which has both positive and negative impacts. In essence, social media was created to facilitate communication between one person and another by crossing distance, time and space. At this time, social media is being used by people all over the world, especially the people of Indonesia. Social media is used as a means of giving and receiving information to each other Agichtein et al. (2008), establishing friendships, posting articles/flyers (event invitations), uploading videos and photos and commenting on them. Along with its development, social media which actually has the potential to be used as things that are beneficial to the community, on the other hand is actually misused.

The misuse of social media can be seen from the data on behavioral deviations through social media such as Facebook and Twitter, covering the age group of 13-15 years which has a portion of 12.3% of the total social media users in Indonesia, or 5,078,440 users out of 41,777,240 people. For the 16-17 year age group, 6,177,060 people or 15% and for the 18-24 year age group, 17,417,600 people or 42.3%. When combined, the 13-24 year age group has the largest portion, namely 79, 6% or 28,673,100 people (Medan, 2016). Based on these data, the largest social media users are young people whose use can have a positive or negative impact. Social media has both positive and negative impacts. The positive impact of social media can contribute to expanding relationships as well as providing and obtaining useful information through various available facilities, so that this can be used as a means to do good (prosocial behavior) and adjust to socializing (flexible behavior). While negatively, social media can make someone cheat others, fight, bullying and so on.

Research by Wijaya & Godwin (2012) found that social networking activities (facebook and twitter) have an influence in real-world life on adolescents, both

prosocially and antisocially. Prosocially, teenagers use social networking sites as a medium for friendship, exchange of information, broaden their horizons, and even online businesses that can provide material benefits. While antisocially, it is not uncommon to find quarrels on social networking sites, spreading inappropriate photos/links, non-constructive statuses and so on. When a person is exposed to digital media and the internet for a long time, it will develop new ways to socialize, interact, think and behave (Tapscott, 2009). The results of the research by Sponcil & Gitimu (2013), found that students have at least one type of social networking site as a means to build communication and get along with other people who are more or less influential in their daily lives. Based on the description above, it can be said that social media which is currently increasingly spreading among the world community, especially in Indonesia, can affect their behavior in real life.

Figure 2. Output of digital era 4.0 in learning

Figure 2 above, as an illustration of today's teachers and students are required to learn digitally. Especially since the Covid-19 pandemic, of course teachers must be more creative in managing learning. One of the efforts is to bring digitalization. Thus, this shows that the digital era 4.0 is the demands of the times. In relation to student psychology, it certainly has a tremendous impact, including; make it easier for students to learn, get to know advanced technology faster, provide learning experiences for students, teach students to adapt in the digitalization era. In fact, currently the use of social media is one of the most widely used mediators. Some television shows, for example, many viewers comment on a topic through their Facebook, Twitter, Instagram accounts and so on, as well as advertisements that are broadcast on television, now many include social media accounts as a means to provide and obtain information. About a product being marketed. On the other hand, there are also negative reports related to the use of social media, for example some public figures who feel disadvantaged because certain parties misuse their personal accounts to deceive others on their behalf. In addition, there is also news about fraud through social networks Facebook, Instagram or Twitter, namely by selling a product, getting acquainted through chat, then being invited to meet and kidnapped. Based on several research results and various reports that appear, it is illustrated that the use of social media affects a person's behavior.

Research from the Australian Communications and Media Authority (ACMA) suggests that many young people spend their time using the internet, especially social media at home, school/campus via computers/netbooks and on the road via gadgets. Then the activities carried out in using the internet include email, opening a blog, chatting, playing online games, opening YouTube videos and opening social networking sites. Based on the results of the study, it was found that there are positive and negative impacts of using the internet, especially social media. Therefore, the community, especially young people, must be able to make these technological advances to make useful choices in using them so that they can have a positive impact on themselves and for the wider community. Therefore, Come on! Use our social media accounts for positive and useful things for many people, be a blessing through our social media accounts.

Student readiness to learn is very influential on the adjustment of students in school. Many people argue that student learning readiness is determined by the age of the child, this cannot be completely justified because there are many other factors that must be considered in determining learning readiness. These factors include cognitive abilities, affective abilities, social skills, and psycho-motor abilities. Family environmental factors also play a very important role in shaping children's readiness to learn, including the socioeconomic status of the family, a family environment that is rich in learning stimuli, and a stable family structure. Motivation is a psychological construct that becomes the impetus for the occurrence of a behavior or action. Sprinthal, that in the context of education, motivation is the impetus that drives learning activities in students. Motivation can be created because of the interaction between the needs that ask to be fulfilled in a person (internal) with external goals that cause a person to take an action.

Motivation can be divided into 2, namely internal motivation and external motivation. Internal motivation is motivation that is satisfied through internal reinforcement within a person (internal reinforcer) while external motivation is motivation that is satisfied through external reinforcement outside one's self (external reinforcer) (Hanurawan & Waterworth, 2007). No matter how great a child is, it will definitely need motivation. The need for motivation is very complex. Maslow in Hanurawan & Waterworth (2007), describes the hierarchy of needs and motivation pyramids as follows: (a) physiological needs, (b) security, (c) loving and being loved, (d) valued (recognition), (e) cognitive (knowledge) and aesthetics, and (f) maximum self-actualization. Teachers must be able to develop student motivation through learning activities and a conducive learning environment for students.

First, *student psychology development*. The psychological development of students must be able to be understood by the teacher in order to develop teaching methods. Each period of child development, the method used is different. At the level of childhood development, play is a pressing point of the learning process. At the level of adolescent development, in learning activities the teacher must be able to understand the characteristics of cognitive, affective, psychomotor, and social transitional development. Secondly, *student intelligence* is the cognitive ability that exists within a person to solve the problems that are being faced. The task of the teacher in this case is to try as much as possible in developing the dominant

intelligence in the child, or to balance all these intelligences if possible. The development of multiple intelligences in students must be adapted to the conditions of physical, psychological, and spiritual development of the subjects of the students.

Table 1
Schematic of the role of ICT in students' learning and psychological development

No.	ICT Goals	Output	Percentage %
1.	Digital based learning	Student skills development	35%
2.	Positive impact	Psychological development of students	35%
3.	Quality internalization	Multi-student intelligence in digitalization management and	30%
	Total		100%

The table above provides a firm statement that information and communication as part of technology are also developing very rapidly, affecting various lives and providing changes to the way of life and daily human activities, including in the world of education. Education is developing very rapidly, including digital learning. By utilizing the development of information and communication technology, education can reach all levels of society. Digital learning begins with optimizing the use of digital technology in the learning process. Especially after entering difficult times due to the ongoing COVID-19 pandemic, until now digital-based learning has begun to develop with the use of electronic terms in learning, such as electronic books, electronic libraries, digital-based learning media and so on. Technological advances also seem to have an effect on the world of education today. In today's conditions there are many uses of technology in the learning process, one of which we can see from the use of educational media or what we are familiar with IT-based learning media. Digitalization in learning today cannot be ignored. It's no longer just a spectacle. But digitalization has an important role in the world of education, especially in learning as the main medium. Because digitization can be used as a reference guide in the development of student intelligence (multi-intelligence). In addition, the most memorable thing for students is to provide a maximum learning experience.

Conclusion

Global demands require the world of education to always and constantly adapt technological developments to efforts in improving the quality of education, especially adjusting its use for the world of education, especially in the learning process. Digital technology can also be useful for changing human behavior, including education and students, in finding, collecting, documenting, processing and re-transferring teaching materials as needed. Mixing teaching materials in the learning process with digital technology can be more interesting and provide learning motivation, because mixing teaching materials is not monotonous in text, but can be mixed more creatively and interestingly because it combines

images, audio, video and animation, so that it can affect changes in learning behavior. develop better.

Advances in technology and information media have been felt by almost all levels of society, both in terms of positive and negative aspects of their use. This is because accessing information media and technology is classified as very easy or affordable for various groups, both for young people and parents and the rich as well as the lower middle class. Even in general, currently children aged 5-12 years are the most users of technology. Therefore, it is not surprising that the positive impact of the development of information media and technology for children aged 5 to 12 years is said to be the multitasking generation. Specific problems for students include deficiencies in social skills, tendencies to aggressive behavior, children with below average intelligence levels, and children with above average intelligence levels. The task of the teacher is to be able to address the specific problems of these students with an appropriate approach. Development is a change that occurs in the psychological aspect of each individual to go towards a more perfect direction in a certain period of time continuously to get something new throughout life. Development is not limited to getting perfect but also contains a series of continuous changes with certainty, through a simple stage to the next stage which is higher and more advanced even though it is difficult to measure with measuring instruments.

Educational activities, especially in formal education, such as curriculum development, Teaching and Learning Process, evaluation system, and Guidance and Counseling services are some of the main activities in education which require psychology. Education as an activity that involves many people, including students, educators, administrators, the community and parents of students. Therefore, in order for educational goals to be achieved effectively and efficiently, everyone involved in the education should be able to understand individual behavior and at the same time demonstrate their behavior effectively. The novelty of this research, taht as a teacher, really needs to understand the development of students. The development of these students includes: physical development, socio-emotional development, and leads to intellectual development. Physical development and socio-social development have a strong contribution to intellectual development or mental development or cognitive development of students. Student development is part of the study and application of developmental psychology which specifically studies aspects of individual development at the school and middle school age stages. As an individual who is growing and developing.

Physical development during adolescence starts from puberty. At this time there are physiological changes that change humans who have not been able to reproduce to be able to reproduce. Almost every organ or body system is affected by these changes. Early puberty (prepubertal) and late puberty (postpubertal) adolescents differ in outward appearance due to changes in height, proportions and development of primary and secondary sex characteristics. The way in which students learn is apparently also influenced by the development of the digital world by optimizing the use of digital libraries (online), E-books, journals and so on in meeting the needs of their curiosity towards learning materials. In addition, as the author described above, the role of learning media is also very important in

the learning process as a learning tool, in addition to learning media as an aid in the learning process.

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