

## Teacher Readiness in the Era of Revolution Industry 4.0 to Face Millennial Student

**Anim Purwanto**

University of Muhammadiyah Prof. DR. HAMKA, Jakarta, Indonesia  
naimprakapati28@gmail.com

### **Abstract**

The use of technology and information is currently important for teachers in an effort to prepare themselves to face various educational challenges. This study aims to describe the various challenges of teachers in facing the era of the industrial revolution 4.0 and describe the strategies of teacher readiness in teaching in the era of the industrial revolution 4.0 to face millennial students. This research is a qualitative research with a descriptive approach. While the information collection technique used is literature study, which is collecting information or scientific writings related to library information such as books, literature, notes, and reports related to the research topic. The results of this study describe the teacher's readiness strategy in teaching to face millennial students during the industrial revolution 4.0. First, the teacher prepares technology-based learning media. The use of learning media such as audio-visual video has a positive effect on student learning outcomes in school. Second, teachers have good skills in managing the class. With good classroom management, the teacher can create a comfortable and conducive learning atmosphere. Third, teachers must be creative and innovative in learning. Through creativity and innovation, it means that teachers do not just teach in class, but educate students to hone skills such as working together, thinking critically, being responsible, more creative and having high trust.

**Keywords:** Teacher; Readiness; Revolution Industry; Millennial; Student.

### **Introduction**

The development of information and technology in the era of industrial revolution 4.0 is increasingly rapid and has become an important part of the world of education. This development must be considered for educators to be able to adapt and be able to take advantage, especially in learning. The change in this era cannot be avoided by anyone, so that adequate preparation of human resources (HR) is needed to be ready to adjust and be able to compete on a global scale. Improving the quality of human resources through education from primary and secondary education to higher education is the key to being able to keep up with the development of the industrial revolution 4.0 (Lase, 2019).

Aoun (2018) argues that the success of a country in facing the 4.0 industrial revolution is also determined by the quality of educators such as teachers. Teachers are required to master skills, the ability to adapt to new technologies and global challenges. In this situation, every educational institution must prepare a new orientation and literacy in the field of education. Old literacy that relies on reading, writing and mathematics must be strengthened by preparing new literacy, namely literacy for information, technology and human resources. Thus, in maximizing the use of technology as a learning aid, teachers are expected to be able to produce a better millennial generation who are ready to compete in the global era.

Millennials are the young generation who live in a digital world such as electronic equipment and online networks. The results of research conducted by the Boston Consulting Group (BCG) with the University of Berkley in 2011 in the United States regarding the USA millennial generation are as follows; 1) interest in reading conventionally has now decreased because generation Y (millennial) prefers to read via their smartphones, 2) millennials are required to have social media accounts as a communication tool and information center, 3) millennials definitely prefer cellphones over television. Watching a television program is now no longer an entertainment because they can find anything on their cell phones, and 4) millennials make the family the center of their consideration and decision makers (Sumantri & Yulleila, 2019).

This millennial generation is very close to technological change and sophistication. As educators (teachers), in addition to expanding knowledge, they must also be able to understand and adapt the character of each student as the millennial generation by using the right learning concepts and strategies. An educator is obliged to know the characteristics of each student. Knowledge in the form of physical characteristics, skills, talents, learning styles, stages of development, and readiness to learn new material are some of the various important knowledge that must be mastered by educators about their students. This knowledge will greatly help educators to build closeness emotionally with their students (Nuriyati & Chanifudin, 2020).

Therefore, in this era of industrial revolution 4.0, teachers must use technology and be smart in seeing the learning situation so that they are ready to face millennial students. Teachers must have the ability to use electronic tools and the ability to operate computers is a must to make it easier for teachers in learning activities. Thus, the use of technology and information is important for teachers as an effort to prepare themselves to face the various challenges of education in the present era.

The results of research conducted by Diplan (2019) illustrate that, in this era of globalization and information, teachers and lecturers face challenges in the form of student behavior who like to surf in cyberspace through their android, gadgets or sophisticated cellphones. The behavior of these students is marked by a tendency to prefer reading on cellphones rather than books, like to find various information on their own without doing a first recheck, like to make friends through social media accounts, and seem individualistic. Fajriana and Aliyah (2019) mention the challenges of education in the millennial era faced by teachers in the form of digital literacy, teachers as lifelong learners, presenting fun and meaningful learning, teachers must be role models, because there are changes in students in the millennial era, teachers must see this challenge as a positive thing by always innovating and learning skills in accordance with the demands of the times.

The teacher challenges described above illustrate that the current development of technology and information requires teachers to be able to use them intelligently, especially in the selection of innovative and modern media, methods and learning models according to their era. In learning in the current era, teachers must give freedom to students to play an active role. In addition, teachers must be good examples for their students and teachers must be ready to give birth to a generation that is superior, intelligent and has character. Therefore, this paper tries to describe the various challenges of teachers in facing the era of the industrial revolution 4.0 and various strategies for teacher readiness in teaching in the era of the industrial revolution 4.0 to face millennial students.

## **Research Method**

This research is a qualitative study using descriptive methods. Descriptive research method is an activity that aims to describe a situation or phenomenon, which is designed to obtain

information in the current state (Maolani & Cahyana, 2016). The descriptive approach was chosen considering that the purpose of this study was to describe teacher learning strategies in the era of the industrial revolution 4.0 in dealing with millennial students.

Data collection techniques used is a research library. In the search for theory, the writer will collect information from the literature related to the research topic. Literature sources are obtained from books, journals, articles, research results and other appropriate sources. After obtaining relevant information, it is then compiled regularly for use in research.

## **Result and Discussion**

### **Millennial Student**

The term millennial can be known as the present era. Diplan (2019) explains that the millennial generation has several characteristics, namely: 1) millennials no longer believe in one-way information distribution, 2) millennials prefer cellphones over television, 3) millennials are required to have social media, 4) millennials dislike reading conventionally, 5) millennials know more about technology than their parents, 6) millennials tend to be disloyal but work effectively, and 7) millennials are starting to make a lot of cashless (non-cash) transactions.

Suissa (2015) described several characters of the millennial generation, namely: first, for the millennial generation, computers are normal. Second, the presence of self-identity is no longer real. Third, give priority to results rather than theory. Fourth, the learning process is similar to a game that uses trial and error methods. Fifth, the millennial generation is very comfortable if they are given a variety of tasks. Sixth, millennials are people who are anti procrastination.

The millennial generation referred to in this study are students who are pursuing education at school. Thus, millennial students are students who have the ability to use technology and information for the benefit of school work. Students are also said to be millennials if they are able to keep up with the changes in their era and technological sophistication. The students living in the millennial era spend 6.5 hours every day reading print, electronic, digital, broadcast and news media. This illustrates that millennial students are very dependent on social media and electronic and digital media (Barni, 2019).

### **Teachers**

In the Law of the Republic of Indonesia No. 14 of 2005 concerning teachers and lecturers means that teachers are professional educators with the main task of educating, guiding, directing, training, assessing, and evaluating students in early childhood education through formal education, basic education, and secondary education

Teachers are not only teaching (delivering material and giving assignments or homework) in class, but teachers also educating students to become a superior, intelligent and competitive generation of the nation in the global era. Therefore, the word teacher is often replaced by the term educator. The intended educator is someone who has the responsibility, skills, knowledge and ability to develop the potential of students in school. Thus, educators (teachers) have an important position in the implementation of education, because educators are parties who are in direct contact with the elements in an educational activity, especially students (Nuriyati & Chanifudin, 2020).

Teachers as educators must be responsible for providing material, values and rules to students. One of them is responsibility in classroom learning. Every teacher must master effective teaching and learning methods, be able to develop curriculum, syllabus, and lesson plans, carry out effective learning, become a model for students, provide advice, carry out learning evaluation results, and develop students' abilities (Febriana, 2019)

From the description above, it can be concluded that a teacher is someone who has the skills and knowledge to educate their students and is responsible to them so that they always develop their potential.

#### Challenges for Teachers in the Industrial Revolution Era 4.0

In the era of the industrial revolution 4.0 or the digital age, teachers are required to adapt to developments in technology, information and communication. The learning system that is managed by teachers in the classroom must be adjusted to the standards of the progress of the current era.

Apart from mastering the aspects of the scientific material being taught, teachers are required to understand technology and always be creative and innovative. Teachers must be role models for students in the millennial generation, so that students understand the limitations of technology. Teachers in today's era must be more open to new thoughts. Teachers are required to educate students according to their times, as long as they do not conflict with existing norms (Diplan, 2019). The teachers have challenges in the form of: digital literacy, teachers as lifelong learners, presenting fun and meaningful learning (joyful and meaningful), and teachers must be role models (Malik, A. R., & Asnur, M. N. A., 2019; Asnur, M. N. A., Adhima, F., Ayuwijayanti, M., & Marsuki, R. R., 2019; Fajriana & Aliyah, 2019).

Advances in technology also have an impact on changes in attitudes, behavior and character of students. Among them are internet addiction and laziness to learn due to online games and watching, losing time to play with children of the same age because they are more focused on their digital devices, causing a lack of balance in children's social life, and even potentially reducing academic achievement (Lase, 2019).

With the changes that have occurred to students, this is where teachers have an important role in restoring their character for better use of technology. Teachers must see that various kinds of challenges in education in schools are a new learning and experience. Therefore, teachers need various tricks and strategies in managing learning in the current era, namely innovative, fun learning and learning that involves students to be more active in class.

#### Teacher Learning Strategies in Era 4.0

In general, strategy has the meaning of an effort to achieve predetermined goals or objectives. Strategies are general patterns of student teacher activities in realizing teaching and learning activities to achieve the goals outlined (Djamarah, 2006). This statement is in line with the opinion from Hamruni (2012) that strategy means the general pattern of teacher-student activity in realizing teaching and learning activities. Sanjaya (2008) adds that if a strategy is drawn up to achieve certain goals, it means that the direction of all decisions for the preparation of learning steps, the use of various facilities and learning resources are all directed towards achieving goals.

Meanwhile, the word learning became known after the issuance of the National Education System Law No. 20 of 2003, which defines learning as a pattern of interaction between students and educators and learning resources in a learning environment. This statement implies that learning is an aid provided by educators so that the process of acquiring knowledge, mastery, skills and character, as well as the formation of attitudes and beliefs in students. Learning is a process to help students learn well. However, in its implementation, the word learning is often identified with the word teaching (Susanto, 2013). Learning is a process of interaction between students and educators and with learning resources in a learning environment (Nasution, 2017).

Noting some of the definitions above, it can be concluded that a learning strategy is an activity that involves elements such as teachers or educators, students and learning resources that are planned systematically in an effort to achieve the expected learning goals together.

Learning in the era of the industrial revolution 4.0 requires teachers to be more prepared and able to adapt to increasingly sophisticated technology, so that teachers can make optimal use of it. This development certainly requires teachers to be more creative and innovate in various ways in the teaching and learning process. Therefore, in order for teachers to be proficient in dealing with millennial students, various reliable and accurate strategies are needed when the teacher teaches in class.

### Preparing Technology-Based Learning Media

The use of learning media in the classroom allows the material delivered by the teacher to be accepted and understood by students. Therefore, learning media has an important position in learning planning because media has two main roles, namely as a teaching aid and as a learning resource that can be used independently by students (Rusman, 2012; Malik, A. R., Emzir, E., & Sumarni, S., 2020). There are several principles put forward in making learning media, namely visible (easy to see), interesting, simple, useful, Accurate (correct and right on target), reasonable, and Structured (well arranged, coherent) (Aqib, 2013).

In the current era, technology-based learning media through the Kvisoft Flipbook Maker (KFM) application can be used for teachers when teaching. This application can be effectively used in the classroom, especially subjects that require a lot of demonstrations and demonstrations. This is because the KFM application is equipped with multimedia such as audio, video, and animation (Rahim, Suherman, & Murtiani, 2019). From the results of his research it proved that there were changes in learning patterns using KFM media (previously not using media), making students more active and enthusiastic in learning activities. The digital books are considered to have a dynamic appearance, accompanied by animations and videos that can make students more active in learning activities (Nurmayanti, 2015; Saleh, N., Saud, S., & Asnur, M. N. A., 2018).

One of the learning media that has a big impact on the success of learning is audio visual. Visual media is a medium that can provide visual stimuli such as pictures or photos, sketches or diagrams, charts, graphics, cartoons, posters, bulletin boards, and others (Febriana, 2019). Video is an audio-visual media that can improve student achievement and learning outcomes in learning. Through video shows, students can be stimulated, both visually through the appearance presented, and from the audio side, namely through the accompanying voice (Joenaity, 2019). Thus, the use of video in learning is expected to stimulate the desire of students to learn.

The results showed that there was an effect of the use of audio-visual video learning media on student learning outcomes (Novita, Sukmanasa, & Pratama, 2019). This is supported by other research which states that interactive video tutorial learning media are very suitable for use as learning media (Irawan & Wirasasmita, 2019). Joenidy (2019) adds that teachers can make learning videos through the Sparkol Video Scribe application. This application can be used to create learning content in audio visual form. Apart from attractive animations, Sparkol Video Scribe supports not only text and audio, but also a combination of images and flash.

Therefore, the importance of teachers in being creative and utilizing learning applications that can be used in class. One of them is learning with videos which can increase students' motivation to learn. Because the success of an educator is not only influenced by his ability (teacher competence but educators must be able to collaborate with technology (Arifin & Setiawan, 2020)

### Teacher Skills in Classroom Management

A good class is able to become a second home for students. A comfortable classroom atmosphere is an important part of transferring knowledge. Therefore, good classroom management is the key to the success of teachers in presenting a conducive and comfortable atmosphere so that they are able to make students as learners who no longer depend on teacher instruction in the classroom (Joenaity, 2019)

In class management, the teacher is responsible for the activities carried out in class. The teacher as the main key holder of learning must be able to manage the class well. The role of the teacher is not only to make lesson plans, deliver material and give grades to students, but teachers must build values in their students (Pamela et al., 2019). Joenaity (2019) described there are several tricks that teachers can apply in managing the class so that it creates a comfortable atmosphere and is able to make students feel at home in it, so that learning can be enjoyed by all class residents. These tricks include: 1) arranging seating, 2) determining a sitting partner, 3) learning output, 4) habituation in class, and 5) seating rotation.

Previous research regarding teacher skills in managing the class has been conducted by Pamela et al (2019). The results of his research indicate that the skills of teachers in managing the class can be done by always accustoming students to always being disciplined, neat, and clean in all respects. Classrooms with various decorations so that the classroom feels comfortable and beautiful. This is supported by the results of other studies which illustrate that classroom management planning is carried out by arranging facilities, teaching management and student management. The implementation of classroom management is carried out by applying several classroom management principles and several approaches, supervision is carried out continuously (Warsono, 2016)

The results of the above research explain the importance of teacher strategies in managing classroom learning, so that the room situation becomes conducive and comfortable. Therefore, the skills of teachers to manage classes in the era of the industrial revolution 4.0 are an important part of dealing with students in the millennial era. If the teacher has good skills, the learning atmosphere will be more conducive and students will be more enthusiastic when learning in class. This has been proven by the results of research by Astuti and Fathoni (2018) which prove that teachers who have good teaching skills will encourage students to learn more actively. In addition, teachers who are skilled in implementing learning can create a conducive atmosphere in the learning process, so that students feel happy to take part in learning. Still from Astuti and Fathoni that with good skills, teachers are able to attract students' attention, so that learning is not boring.

### Teacher Learning Innovations in the Era 4.0

The limited facilities provided by the school are no longer a barrier for teachers to innovate and be creative. Therefore, in the era of the 4.0 industrial revolution mastering technology is a must for teachers. With innovation, it means that teachers are literate in technology which is then used to provide solutions in teaching and learning activities in schools. An innovation is an idea, an idea implemented in the curriculum and learning that is considered new to solve educational problems (Sanjaya, 2010)

Learning innovation 4.0 emphasizes the mastery of learning methods by educators, their application in the classroom, and their development in learning. Therefore, through learning innovation teachers are expected to adapt to the current sophistication of information and communication technology (ICT). Innovation in learning that can be used as a source of inspiration

by an educator can be done through various methods, methods and tricks including: multimetode, internet, experience, experimentation, and creativity (Joenaidy, 2019).

Educators can maximize everything that can be used to deliver learning information including the use of the environment, so that something real can be presented in an applicable way. Learning innovations in the 4.0 era resulted from how teachers can take advantage of technology and also depend on the creativity of the teacher himself.

## Conclusion

The development of technology, information and communication requires teachers to be more creative and innovate in the teaching and learning process. In dealing with millennial students in this era of industrial revolution 4.0, teachers must prepare various strategies, especially when teaching and learning activities take place such as 1) The teacher prepares technology-based learning media. The use of learning media such as audio-visual video has a positive effect on student learning outcomes in school. 2) The teacher has good skills in managing the class. With good classroom management, the teacher can create a comfortable and conducive learning atmosphere. 3) Teachers must be creative and innovative in learning. Through creativity and innovation, it means that teachers do not just teach in class, but educate students to hone skills such as working together, thinking critically, being responsible, creative and having high trust.

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