Description of teacher professional competency by using media and learning resources in SD Muhammadiyah Demangan Yogyakarta in the industry era 4.0

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ABSTRACT

In an effort to improve the quality of education in Indonesia, one of which can be done by increasing and developing the professional competence of teachers in the industry era 4.0. This study aims to describe the ability of teachers to use media and learning resources as well as the barriers faced by teachers in using the media and learning resources in SD Muhammadiyah Demangan. This research is a descriptive qualitative research. Data collection methods used i.e., interview, observation and documentation. Data analysis in this research with the reduction of data, display data, and the withdrawal of the conclusion. Test the validity of the data using triangulation techniques and sources. The results showed that (1) the ability of teachers to use instructional media such as print, visual, audio-visual and games are already good just for the media game is rarely used because of the time limitations. (2) the ability of teachers using learning resources such as message/content, people/teachers, material/software, tools/hardware, engineering and the environment is already good. (3) the obstacles facing teachers namely time, funding, networking internet, interest, capabilities, characteristics and level of understanding of different students and students who do not focus or not. In addition to enhancing the competence of a teacher who is a professional in the industry 4.0 minimum teacher also has the capability of 4 c i.e. Communication, collaboration, critical thinking, and creativity thinking in an effort to improve the quality the teachers themselves.

Keywords: ability of the teacher 4 c, learning resource, media of learning, teacher competencies

1. Introduction

The background in this study started from an education that is an effort or process undertaken to improve human resources as well as a means to print quality human resources. In addition to improving the competence of a professional teacher in the industry era 4.0 minimal teachers should also have a capacity 4C namely communication, collaboration, critical thinking, and creativity thinking as a demand to increase A teacher's self-quality. Education today is becoming increasingly important to ensure students have the skills of learning and innovating, skills using technology are also prioritized, and are expected to survive by using skills for his life.

As stated in Law Number 20 of article 1 of paragraph 1 year 2003 (Depdiknas, 2003) on the national education system stating that education is a conscious and well-planned effort to awaken and develop the potential Individuals to be intelligent, skilled, and characteristic individuals in order to achieve certain objectives. There are many things that can be done to achieve national educational objectives, one of which is through learning activities that are performed at school. Remembering about learning activities in schools is certainly not separated from a teacher's participation.
Teachers are the ones who have a duty to educate and guide students in school. The teacher’s role is very large in education, because without the teacher, education will not happen. Guru is an education executive in early childhood, formal education, primary education, and secondary education. Guru is a noble profession but also has a heavy duty that educate the next generation of the nation, so it is appropriate if the teacher perform its duties properly.

Teachers should be able to create quality learning activities so that the educational objectives can be achieved with maximum. Teachers in the classroom should be able to create learning that is conducive, fun, unboresing, effective, efficient and engaging students actively in the learning activities. Basically, education when viewed from the process is a communication activity, which is communication between teachers and students. In such communications, teachers convey material to students in the hopes that students can understand and absorb the subject to the fullest extent, but there are many obstacles in delivering the material when using only oral use. Submission of material that uses oral will be tedious for students and the material delivered will not be absorbed to the fullest, therefore it is necessary that other tools or intermediaries are supportive in the submission of the subject matter so that students Bored and subject matter can be maximally absorbed.

As was described by Usman (2013) that one of the skills that teachers must master is the ability to use learning tools and methods in which it encompasses the ability to develop and determine Media and learning resources that are suitable and in accordance with the learning materials to be taught. Media and learning resources are very important in the learning activities in the classroom, because the media and learning resources are two things inseparable and are the means to convey the lesson material to the students. According to the association of education communication technology in Warsita (2008) The source of learning as all sources either data, people or objects that can be used to provide facilities (ease) of learning for students.

Without any learning resources, learning activities cannot be carried out well due to the lack of supporting facilities in the learning. Learning Media is a part of learning resources. The success of the learning process is strongly influenced by various learning media. The use of various media learning can make it easy for students to understand the material delivered optimally. According to Munadi (2008) The learning media is everything that can convey and distribute messages from sources in a planned manner so that created conducive teaching activities where the recipients can do the process Learn efficiently and effectively.

Without the media, the learning process will not run effectively and efficiently, given that many obstacles that arise when teachers in conducting learning use only one learning resource without being supported by the learning media. Daryanto (2013) reveals that the obstacles that arise in the learning process are (1) verbalism, meaning that students can mention the word but do not know the meaning. This happens because usually teachers teach only with verbal explanations (lectures), students tend to just impersonate what the teacher says; (2) misinterpretation, meaning by the same term or word, is interpreted differently by the students. This happens because usually teachers only explain orally with no use of other learning media, such as pictures, charts, models, and so on; (3) Attention is not centralized, it can occur because some things, among others, physical disorders, there are other things that are more interesting to affect the attention of students, students daydream, how to teach boring teachers, how to present subjects without variations, Lack of supervision and guidance of teachers; (4) No understanding, meaning lack of logical and psychological meaninglessness. What is observed or seen, experienced separately. There is no logical thought process from consciousness to concept.
Learning resources are all things that can be used as a learning instrument while learning media is a tool or means that can support and support in delivering learning materials. Teachers should be able to use a variety of things in the school environment or outside the school environment that can be used as a learning resource and can choose the learning media that is easy to obtain or use and in accordance with the material Lessons. Diverse Media and learning resources can minimize the level of the students' boredom when they follow teaching and learning activities in the classroom. The ability of teachers to use a wide range of media and learning resources in every division is very influential in the success of the learning process, so that students will be maximized in understanding the material presented by the teacher and Learning objectives can be achieved optimally.

In fact, there are still many teachers in Yogyakarta who still rarely use media and various learning resources. As described from ("Ah, pengajaran guru", 2017) that "the less interesting learning process makes the students' absorption in the lesson not optimal. The results of the research of "professional portrait of Guru Yogyakarta in teaching activities" conducted in 2010 shows, 75 percent of teachers of research participants have not used the learning media in teaching. The objects in the classroom alone have not been used for teaching aids, let alone prepare learning media from home ". According to the statement above, you can understand that there are still many teachers who have not used the media and learning resources. Most teachers only use textbooks as students' learning resources in class without using other sources and learning media. This can make students saturated and bored when they follow learning activities in the classroom, so that the material delivered by the teacher cannot be absorbed and understood by the students. Students tend to be crowded and jokingly with their friends during learning. This is because there are still many teachers in Yogyakarta who do not have the ability to develop and use various media and learning resources that can support the success of the learning process. If this continues to be done then the purpose of the education itself will not be achieved with maximum and this will certainly affect the value of the student.

The ability of teachers to use learning resources and supporting media in learning is necessary to achieve the objectives that the school aims to achieve as well as achieving national educational objectives, therefore researchers observe To some elementary school in Yogyakarta, one of which is at SD Muhammadiyah Demangan Yogyakarta. SD Muhammadiyah Demangan Yogyakarta is one of the few good schools in Yogyakarta, from year to year always produce graduates with an average value of the national exam is good even graduates from SD Muhammadiyah Demangan Yogyakarta Average received at a favorite SMP. Based on problems is an obstacle in SD Muhammadiyah Demangan Yogyakarta namely: 1) Students who are not focused and less attentive during the learning process will even tend to like to joke and play with his friend, 2) There is a class teacher who still uses textbooks as a source of learning students in class without being supported by learning media, whereas learning Media is one of the main components in the learning process because it supports the success of Learning, 3) During additional lesson lessons, class teachers usually ask their students to work on the questions in the student's worksheet in relation to the previously submitted material, but it seems that many students still cannot do The material that has been delivered in the past, and 4) Barriers faced by teachers in teaching as students are bored, pay less attention because of how to teach a monotonous teacher and only use one learning source that is teacher and textbook only during the learning process without being supported by media Interesting learning so that students are more happy to play with their friends when the teacher explains and the material described cannot be understood by the students. Therefore, based on exposure to the above problems, researchers are interested to conduct research focused on the
ability of teachers using media and learning resources at SD Muhammadiyah Demangan Yogyakarta.

Basically, research objectives are done so that education objectives can be achieved with maximum, so that teachers are expected to create quality learning activities. Teachers in the classroom should be able to create learning that is conducive, fun, unboying, effective, efficient and engaging students actively in the learning activities.

2. Research Methods

2.1 Types of research

The research methods used in this study are qualitative descriptive. Arikunto (2010) explains that descriptive research does not intend to test the hypothesis but only describes what it is about a variable, symptom or circumstance. The opinion is in accordance with this study which aims to describe or expose an event. Bogdan and Taylor in Moleong (2016) suggest that qualitative methods are research procedures that produce descriptive data of written or spoken words of people and behaviors that can be observed. So the data resulting from qualitative research is more words that describe the thing observed.

2.2 Place and time of research

This research will be conducted in SD Muhammadiyah Demangan, Gondokusuman, Yogyakarta. This research will be conducted for one month namely in April 2017.

2.3 Subject and research objects

The subject of this study was 6 class teachers from class I to class VI as the main source of information, then to 12 students consisting of class I to VI, as well as the principal as the person who most understand how the circumstances of the teacher at the school. While the research object is the ability of teachers in using media and learning resources. This research will use purposive sampling techniques. Sugiyono (2014) suggests that purposive sampling is a sampling technique or retrieval technique of data source with certain consideration of the researchers themselves.

2.4 Engineering and research instruments

The data collection techniques used in this research include observation guidance, interviews, and documentation. Sugiyono (2014) explains that data collection can be done in various settings, various sources, and various ways. For observation guidelines divided into five aspects: selection of media and learning resources, skills using media and learning resources, skills to develop media and learning resources, involvement of students in using media and learning resources and barriers to using media and learning resources. For a grid of teacher interviews, students and principals consist of several aspects i.e. selection of media and learning resources, skills to use media and learning resources, skills to develop media and learning resources, student involvement in Using media and learning resources and barriers to using media and learning resources. Esterberg in Sugiyono (2014) suggests that the interview is a meeting of two people to exchange information and ideas through questions and answers, so that it can be constructed in a particular topic.
2.5 **Validity of data**

The validity of the Data on this study uses triangulation in data credibility testing. Triangulation is the checking of data from various sources using various ways and various times. In general, qualitative research usually uses techniques of triangulation or combination of three techniques, namely observation, interviews and documentation, as stated by Emzir (2011:37) that the most commonly used technique is observation, interviews and documentation.

Observation is the most commonly used data collection technique in qualitative research. Sukmadinata (2015) suggests that observation or observation is a technique or way used to collect data by way of conducting observations of ongoing activities. Matthews and Ross in Herdiansyah (2015) stated that observation is a method of data collection done in a planned and focused by using human senses, by viewing and recording behaviors or The course of a system that has a specific purpose, and reveals what is behind the emerging behaviour and foundations of the system.

2.6 **Data analysis techniques**

The data analysis technique used by the authors is data analysis using the Miles and Huberman data analysis techniques. The components in data analysis according to Miles and Huberman are:

1. **Data reduction**
   - Data reduction means summarizing, selecting the underlying things, focusing on the important things, the themes and patterns are sought. The data obtained by researchers from observations, interviews and documentation and then reduced, so as to provide a clearer picture and make it easier for researchers to gather further data, and look it up when needed. The data obtained by the researcher Dipilah-pilah, then taken as needed as well as removing unnecessary data.

2. **Presentation of data**
   - Data presentation in qualitative research can be done in the form of table, graph, phie chart, pictogram and the like. Data presentation can also be a brief description, chart, relationship between categories, flowchart and the like. Through the presentation of the data, the data can be organized, arranged in a pattern of relationships, so that it will be easier to understand.

3. **Withdrawal of conclusions**
   - The withdrawal of the conclusion or an overview of the overall results of the research has been done in the form of descriptive words that give an overview of the results of the study. Conclusions in qualitative research are new findings that had not previously existed. Findings can be a description or a picture of a previously dimly-lit object after being researched to be obvious, can be causal or interactive, hypothesis or theory.

3. **Result and Discussion**

Based on research that has been conducted in SD Muhammadiyah Demangan Yogyakarta, it can be described the results of research and discussion on the ability of teachers using media and learning resources as well as obstacles faced in using Media and learning resources based on several aspects, namely (1) selection of media and learning resources; (2) Skills using media and learning resources; (3) Skills to develop media and learning resources; (4) Students' involvement in using media and learning resources and (5) barriers to using media and learning resources.
3.1 Selection of media and learning resources.

In terms of selection of media and learning resources, teachers have been able to choose the appropriate media and learning resources and are suitable for use in learning. It is reflected in conformity with the material and supports the objectives of learning, simple or practical, in accordance with the target group, clear view, attracting students, varied, economical, flexible and the latter accompanied by questions, tasks and orders.

In accordance with the material and supporting learning objectives. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have selected the appropriate media and learning resources and support the achievement of learning objectives. In learning, teachers are seen choosing the media and learning resources that correspond to the materials taught, such as material about the names of the day then teachers use power points and videos about the names of the day, then after students To pay attention to the media used by the teacher, students are able to mention the names of the days of the week which is the purpose of the learning. This is in accordance with the opinion expressed by Arsyad (2016) that one of the criteria of selection of good media is according to the purpose to be achieved. Teachers in SD Muhammadiyah Demangan Yogyakarta in selecting the media has been adapted to the material being taught and has been able to achieve the objectives of the study also proves that the competence of a teacher in the industry era 4.0 has had Critical thingking capabilities, and creativity thingking as an effort to improve the self-quality of a teacher.

Simple and practical. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have chosen the media and learning resources that are practical and simple but lasting. In learning, teachers have chosen to choose media and learning resources that are practical and simple but enduring long in learning, such as using media and resources learning power points, videos, movies, pictures and books in learning. The Media and learning resources used by teachers in everyday learning have been very practical and simple but also last long so that it can be used repeatedly and in a long period of time will not be broken. It is in accordance with the opinion of Arsyad (2016) who Reveals that one of the criteria for good media selection is practical, flexible and lasting. So that the media used should be simple or easy to obtain or made by the teacher, practical or can be used anywhere and also easily carried everywhere and can survive for a long time. It is also in accordance with the statement of Prastowo (2015) which reveals that one of the criteria for selection of learning resources is simple and practical where the learning resources should be easy to use.

Match the target group. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have chosen a media tailored to the target group. In the learning, teachers have seen the media that corresponds to the target group, which is when in the classroom with the number of children who are approximately 35 children then the teacher chooses the media for large groups. Because the average teacher teaches one class with a total of more than 30 students then teachers tend to choose the medium for large groups. This is in accordance with the opinion of Arsyad (2016) that one of the criteria for good selection of media is the target grouping, so the meaning of the selected media should be effective for large groups or small groups.

The display is clear. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have selected the media and learning resources that have a clear view. In learning, teachers are seen choosing the media and learning resources that have a clear look, such as power points, pictures, books, videos and movies. The media and learning resources selected by the teacher have a clear view so that students can see, read even listen well so as to help students
understand the material presented by the teacher through the media. This is in accordance with the opinion of Arsyad (2016) who said that one of the criteria for good selection of media is the technical quality, i.e. images or other visual matters must meet certain technical requirements. The purpose of the statement is that the media and learning resources have to be qualified, ranging from the clear display and the appropriate content material in the learning so that the media and learning resources are able to facilitate the students in learning.

Attracted students' attention. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have selected the media and learning resources that can attract students. In learning, teachers have chosen to choose the media and learning resources that can attract students, such as colored power points, lots of images and little writing, singing video media, animated films or real movies in learning so it attracts students' attention and can focus on the media. When students are interested and the students' attention is focused on the media and learning resources used by the teacher, students also most likely pay attention to the material presented by the teacher. This is in accordance with the opinion of Prastowo (2015) which reveals that one of the criteria of selecting a learning Resource can motivate students in learning, so that learning resources can keep students interested and motivated in following A series of learning activities and observing and understanding the lesson material delivered by the teacher.

Vary. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have selected various media and learning resources. In learning, teachers have seen a variety of media in which media types are many such as print, visual, audio-visual and gaming. During the study, the results were obtained that teachers have chosen a variety of media such as print media such as textbooks, modules and lks, visual media such as images and power points, audio-visual media such as video and movies, then media games such as balloons Questions. This is in accordance with the statements of Seels and Glasgow in Arsyad (2016) that some types of media are projected silent visuals, audio, print and games. The statement is also in line with Daryanto (2016) which reveals that some media types are print media, still images, motion pictures and sound films. In this case, the teacher has been able to choose a variety of media, namely print, visual, audio-visual and gaming. Variation of learning resources used is the source of learning people are teachers as people who convey material to students, learning resources materials or software such as books, modules, handouts, lks, images and power points, resources learning tools or hardware such as LCD, projector, speaker, laser and laptop, resource learning techniques such as lectures, questions and answers and games, environmental learning resources such as classrooms, schools and community environment around the school. It is in accordance with the opinion of Warsita (2008) that the types of learning resources are messages, people, materials, tools, techniques and environment.

Accompanied questions, assignments and orders. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have selected the media with questions, tasks and orders. In the study, teachers have seen the media with questions, tasks and commands, such as textbooks that have been accompanied by questions, assignments and orders, and then the power point made by the teacher in which they are accompanied With questions, assignments and commands. This is in accordance with the statement of Arsyad (2016) that one of the things in choosing the media that includes content or learning materials that are varied, the tasks that exist in the media that will be performed by students and types of learning, such as Menalar, Memorization and so on.

Economical. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have chosen an economical and inexpensive source of learning. In learning, teachers are seen choosing an economical source of learning such as power points, videos and movies
because they are looking for on the internet, if for LCD, projector, speakers and textbooks have been provided by the school, then for laptops do belong Each teacher. The learning resources chosen by the teachers are very economical and do not even use any money. This is in accordance with the statement of Prastowo (2015) which reveals that one of the criteria of selection of learning resources is economical, i.e. learning resources do not have to be expensive and need to be adjusted to the allocation of funds and the needs of learning resources will be used.

Flexible. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have chosen a flexible learning resource. In learning, teachers are seen choosing flexible learning resources such as classrooms, power points, videos, movies, LCD, projectors, speakers and laptops that can be used for several subjects because the school uses the 2013 curriculum. This is in accordance with the statement of Prastowo (2015) which reveals that one of the criteria for selection of learning resources is flexible and compatible where the learning resources can not only be used by one material but can be used to Some material.

3.2 Skills using media and learning resources

In terms of the use of media and learning resources, teachers have been able to use media and learning resources well in learning. This is reflected by the use of media and learning resources in every learning, smoothness and flexibility of using media and the type of media used.

The use of media and learning resources in every learning. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have used the media and learning resources in every learning. In learning, teachers are seen using the media and learning resources in every learning, such as textbooks. On average every day teachers always use textbooks as media and learning resources, but sometimes also supported by media and other sources such as Power point, video, film, LCD, projector, speaker, and laptop. Teachers look skilled in using media and learning resources. Competence of a teacher who owned already in accordance with the teacher in the era of 4.0 is has the ability of colaboration, and creativity thingking because the teacher has been able to use the media and resources in every learning other than using textbooks. This is in accordance with the opinion of Arsyad (2016) stating that the teacher must be skilled in using the media, because any medium of teacher must be able to use it in learning.

Smooth and flexibility using media and learning resources. Based on the results of the study, teachers in SD Muhammadiyah Demangan Yogyakarta have been able to use the media and learning resources smoothly and supplie. In using media and learning resources, teachers are seen as smooth and supplie, such as using media and learning resources such as textbooks, power points, BSE books, videos and movies and then utilizing the surrounding equipment such as LCD, projector, speakers and laptops.

Media types and learning resources are used. Based on the results of the study, teachers in SD Muhammadiyah Demangan Yogyakarta have been able to use various types of media in learning. In learning, teachers often use several types of media such as print media such as books, modules, handouts and Iks, visual media such as power points and images, audio-visual media such as videos and movies, and media games such as balloons Questions. This has proved that teachers have used different types of media in their learning. This is in accordance with the statements of Seels and Glasgow in Arsyad (2016) on several types of media such as visuals, audio, prints and games. The statement is also supported by Daryanto (2016) which classifies some media types i.e. print, still or visual and sound film.
Based on the results of the study, teachers are seen using various types of learning resources in their daily life, such as using the learning resources of different message or subject matter in each learning, the learning resources of the teacher where he is the person who delivers the material to the students every day, the source of learning materials or software such as books, power points, images, modules, handouts, and lks, learning resources tools or hardware namely LCD, projector, speakers, lasers, and laptops, sources Learning techniques such as lectures, questions and answers, and environmental learning resources such as classrooms, school environments and community environments outside of school. The Learning Resource is a type of learning resource that is common or often used by teachers in SD Muhammadiyah Demangan Yogyakarta. It is in accordance with the opinion of Warsita (2008) that the types of learning resources are messages, people, materials, tools, techniques and environment.

3.3 Skills to develop media and learning resources

In terms of development of media and learning resources, teachers have been able to develop media and learning resources well in learning. It is reflected by developing media and self-learning resources, creativity develops media and learning resources as well as media and learning resources that are easy and difficult to develop. Develop your own media and learning resources. Based on the results of the study, teachers in SD Muhammadiyah Demangan Yogyakarta have been able to develop their own media and learning resources in learning. In learning teachers have been able to develop their own media resources such as creating their own power points, finding and downloading electronic school books, videos or movies that can support learning. This suggests that teachers are already independent and able to develop the media and learning resources used in learning.

Creativity develops media and learning resources. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta have been able to develop creative media and learning resources. In learning, teachers have been able to develop the media and learning resources that are creative and can attract students such as developing a colorful power point, there are pictures but the material is made short, then supported by video and animated films in learning that can attract students’ attention. Teachers also take advantage of school environment and community environment around the school to learn so that students do not get tired of learning in the classroom. Teachers have been able to develop creative media and learning resources and can attract students to pay attention to the teacher while describing the subject matter so that the material delivered by the teacher can be understood to the fullest by the students.

This type of media and learning resources are easy and difficult to develop. Based on the results of the study, teachers in SD Muhammadiyah Demangan Yogyakarta have been able to develop several types of media and learning resources in learning. There are several types of learning resources that are easy to develop and also some are difficult to develop. In learning, teachers look easy in developing the resources of learning materials or software such as images, power points, books, modules, handouts, lks, video an film, then teachers also never use props because the teacher found it difficult to Develop.

In learning, teachers often use media such as power points, BSE books, drawings, modules, handouts, games, videos or movies but teachers never use props, this is because the media type that is easily developed by the teacher is Print media such as books that have been provided by schools, modules or handouts, visual media such as power points, BSE books and images that Live Search or download from the Internet, audio-visual media such as videos and movies that Live
Search and Download from the Internet by customizing the material, and media games such as question balloons and traditional games. The teacher's skills have proven an increase in the competence of a professional teacher in the 4.0 industry era because teachers have had the ability of critical thinking, and creativity thinking as an effort to improve the self-quality of a Teacher are able to develop the media and learning resources as needed when learning in class. The kind of media that is difficult to develop for teachers is props.

3.4 Students' involvement in using media and learning resources

Students' involvement in using media and learning resources. In terms of student involvement in the use of media and learning resources, teachers have been able to engage students in using media and learning resources well. This is reflected by the teachers who allow students to use the media and learning resources and also students' reactions to the media and learning resources used by teachers.

Allow students to use media and learning resources. Based on the results of the study, teachers in SD Muhammadiyah Demangan Yogyakarta teachers have allowed students to use media and learning resources. In learning, teachers look to allow students to use print media or learning resources software in learning such as books, handouts and modules, because for media and other learning resources used by teachers are power points, videos and Movies that are aired using the LCD and the media can only be seen and heard by students. So the teacher only allows students to use media and learning resources that are printed or tangible.

Student reaction to media and learning resources. Based on the results of the study, students at SD Muhammadiyah Demangan Yogyakarta look pleased and interested in the media and learning resources used by the teachers. In learning, students look interested and pleased with the media and learning resources used by teachers. Students look pleased with the media and learning resources such as power points, videos and also movies, if students' books look uninterested because every day the teachers use the media and learning resources of the book in learning. Teacher skills in this case, teachers have increased competence in accordance with the industry era 4.0, namely teachers have communication skills, as an effort to improve the quality of self of a teacher, evidenced by the involvement of students in The use of media and learning resources so that between teachers and students can communicate with each other, students will ask a lot if they are involved in the use of media and learning resources related to the material being studied. Teachers will be able to think more creatively and collaboratively if they involve students in the use of media and learning resources. According to Arifin (2017) learning oriented towards higher order thinking skills (HOTS) is needed by educators, to measure and to know the readiness and ability of the students in higher thinking activities.

3.5 Barriers to using media and learning resources

Barriers in using media and learning resources. In the use of media and learning resources, there are some obstacles that arise that cause the maximum use of media and learning resources that will result in the maximum of students in understanding the material delivered by the teacher. Barriers in using media and learning resources. Based on the results of the study, teachers at SD Muhammadiyah Demangan Yogyakarta encountered several obstacles that occurred in the use of media and learning resources in the learning activities. Barriers that arise in using media and learning resources are time, funds, Internet network, different student interests, different skills and characteristics of students, different levels of understanding and students who are not focused or
not noticed. This is in line with Daryanto's opinion (2013) that some of the obstacles that arise in learning are verbalism, misinterpretation, attention is not centered or not focused, and no understanding.

4. Conclusion

Based on the results of the research and discussion, it can be concluded that SD Muhammadiyah Demangan Yogyakarta about the ability of teachers using media and learning resources and obstacles faced in using media and learning resources is as follows:

1) Selection of media and learning resources of elementary school teachers of Muhammadiyah Demangan Yogyakarta have selected the media and learning resources:
   - Subject to material and supporting learning objectives;
   - Simple and practical;
   - Match the target group;
   - Clear view;
   - Attracting students' attention;
   - Vary;
   - Accompanied by questions, assignments and commands;
   - Economy;
   - Flexible;
   It proves that teachers have the ability to have critical thingking, and creativity thingking as an effort to improve the self-quality of a teacher in the 4.0 era.

2) The skills to use the media and learning resources of elementary School of Muhammadiyah Demangan Yogyakarta on average every day teachers always use textbooks as media and learning resources, but sometimes also supported by media and other sources such as power Points, videos, movies, LCD, projector, speaker, and laptop. Teachers look skilled in using media and learning resources. The competence of a teacher is the ability of colaboration, and creativity thingking because the teacher has been able to use the media and resources in every learning in addition to using textbooks.

3) Skills to develop media and learning resources of elementary school teachers of Muhammadiyah Demangan Yogyakarta have been able to develop their own media and learning resources in learning. In learning teachers have been able to develop their own media resources such as creating their own power points, finding and downloading electronic school books, videos or movies that can support learning. The skills of the teachers are critical thingking, and creativity thingking as an effort to improve the self-quality of a teacher is able to develop media and learning resources as needed at the time of learning in the classroom according to Teacher's demands in the 4.0 era.

4) Student involvement in using media and learning resources at SD Muhammadiyah Demangan Yogyakarta teachers have allowed students to use the media and learning resources. In learning, teachers look to allow students to use print media or learning resources software in learning such as books, handouts and modules, because for media and other learning resources used by teachers are power points, videos and Movies that are aired using the LCD and the media can only be seen and heard by students. Teacher skills have been in accordance with the industry era 4.0 namely teachers have communication skills, evidenced by the involvement of students in the use of media and learning resources so that between teachers and students can communicate with each other, students will Many ask if it is involved in the use of media and learning resources related to the material being studied.

5) Barriers in using media and learning resources IE time, funds, Internet network, different students' interest, different abilities and characteristics of students, different levels of
understanding and students who do not focus or do not pay attention.

References


