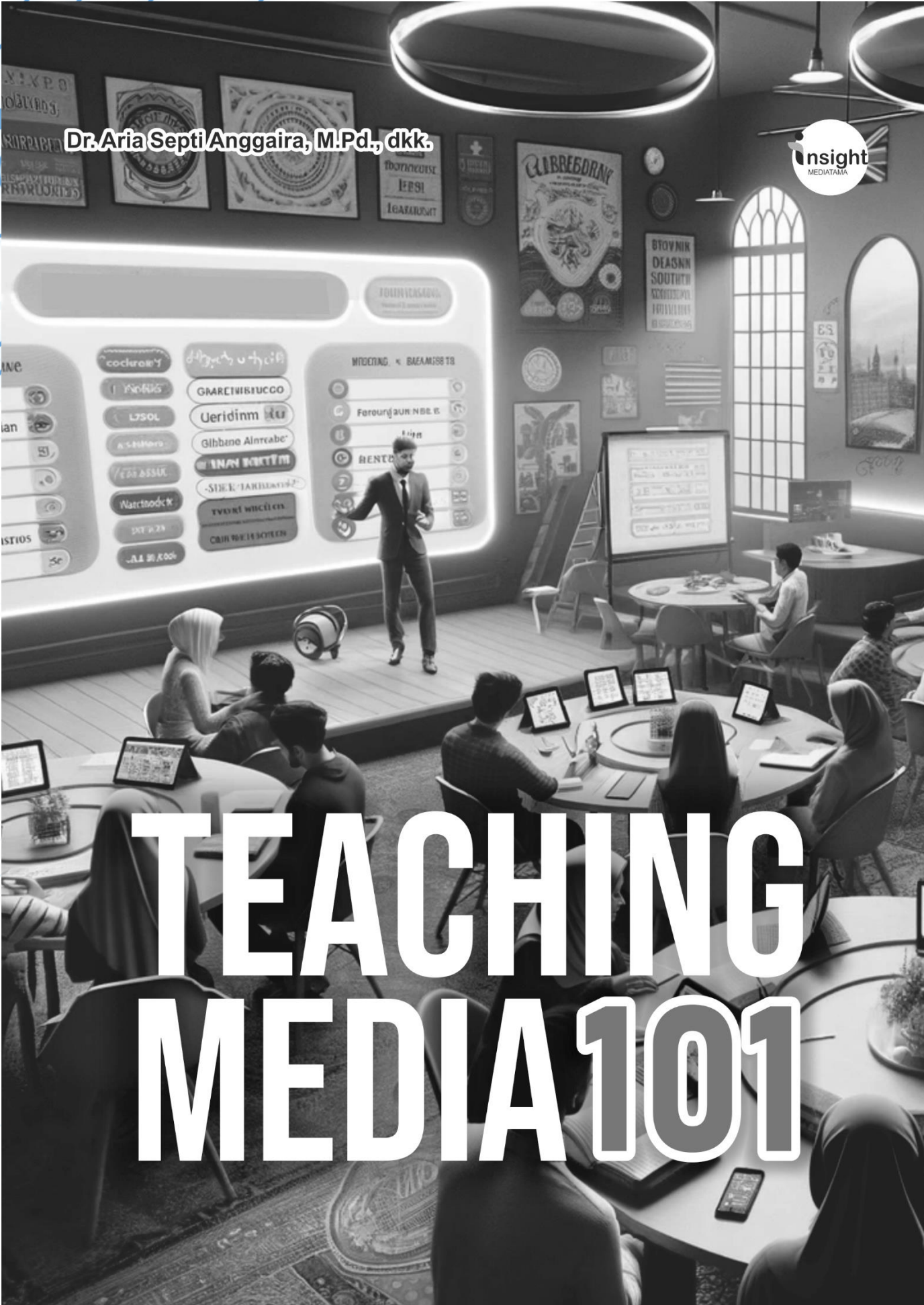
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Insight
MEDIATAMA
TEACHING
MEDIA 101

TEACHING MEDIA 101

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PREFACE

The development of technology is rapidly, provides convenience in various aspects of human life. So many roles can be replaced by technologies developed in certain areas. In the field of education, technology that currently plays a very important role is the use of the internet in online learning. Online learning allows learners to access learning resources to the fullest from online sites on the internet. The only use of technology in online learning is to use hybrid learning in learning. With hybrid learning, learning is no longer limited by time and space. Learning can be done anytime and anywhere.

IAIN Metro has been carrying out online learning since the beginning of 2020 precisely during the Covid-19 pandemic. The campus has provided a Learning Management System (LMS) that can be used for the learning process. This certainly makes it very easy for lecturers and students to carry out the learning process. With this online learning, the flow of information as a learning resource that students can access cannot be limited. Factual and nonfactual information, whether true news or hoaxes, will very easily affect the picnic pattern of students. Fake news that provokes can shake students so that they can commit deviations. Students must be equipped with sufficient Islamic knowledge as their stronghold in facing negative currents.

One way to stem this is to develop Islamic-based teaching materials in each course. This book is the result of research on teaching media courses in the IAIN Metro English language program. This book was developed as a hybrid learning teaching material based on the value of religious moderation. In this book there are 13 chapters, as an introduction to teaching media lectures in general. What distinguishes this book from other textbooks is the integration of the value of religious moderation in the learning media. There are 2 specific chapters that discuss religiosity in learning media and the development of learning media based on the value of religious moderation.

This book is expected to be a textbook used in teaching media courses at IAIN Metro English language program and can also be used in all majors in IAIN Metro. However, this book can also be used as a textbook in teaching media learning in universities and readers in general. The writers realize that in this book there are still many flaws and imperfections. For this reason, input from readers for the sake of improving this book in the future is highly expected.

To all those who have been involved in the preparation until the publication of this book we would like to thank you. Hopefully this work will give some benefit to readers and create a glimmer of benefits for improving the quality of prospective educational professionals.

Metro, September 2022

Writers

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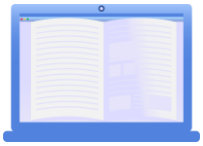


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PROLOGUE

A. Description

Teaching Media is a compulsory course with a weight of 2 credits designed to present various concepts of teaching media. These concepts aim at complementing the teaching and learning process. Activities in lectures include the basic concepts of teaching media and their practices to help the learning process in the classroom. Students will later be exposed to various types of teaching media, ranging from simple to high-tech teaching media, such as electronic multimedia and learning media online. In the end, they are expected to be able to develop their teaching media and use them in the learning process in the classroom as well as in online learning.

B. College contract

Lectures in one semester consist of 16 meetings, one midterm exam held in the middle of the semester, and the Final Semester Exam, which will be held at the end of the lecture.

C. Graduate Learning Outcomes

Realm	Graduate Learning Outcomes
Attitude	1. Dare to submit an opinion. 2. Have an attitude of responsibility towards the duties assigned by the lecturer. 3. Honest, confident, and meticulous in doing assignments and exams.
Knowledge	1. Understand the content of the lecture material. 2. Understand the assessments used in the lecture process. 3. Understand the appropriate learning media for use in learning.

General skills	1. Passionate about attending lectures. 2. Able to utilize learning resources. 3. Disciplined and independent in doing tasks. 4. Able to develop learning media that is by the learning material.
Special Skills	1. Able to learn independently and sustainably (long-life learner). 2. Can work in groups to complete tasks. 3. Able to develop and create learning media tailored to the needs of students.

D. Learning System

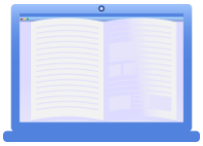
Learning is carried out in Hybrid Learning. Hybrid learning is often equated with blended learning. Hybrid/Blended Learning is learning that integrates online classroom activities with planned and meaningful face-to-face learning activities and considers the portion of implementation.

Learning Teaching Media based on the Value of Religious Moderation is carried out using the Learning Management System at the Metro State Islamic Institute (IAIN) Metro. Teaching materials are in the form of pdf books consisting of 2 languages, namely Indonesian and English, and will be placed on a website that has been specially created.

E. Learning Materials

The learning materials developed in this book consist of 13 units. The material is developed based on the learner's needs and the lecturers' needs in the teaching media course at IAIN Metro. The material was developed based on the value of religious moderation. The thirteen units are:

1. Unit 1 Prologue
2. Unit 2 Media Concepts, The Nature of Learning Media, and Learning Resources



3. Unit 3 Learning Technology and Media
4. Unit 4 Types of Learning Resources
5. Unit 5 Types of Learning Media
6. Unit 6 Selection of Media and Data Resources
7. Unit 7 Religiosity in Learning Media
8. Unit 8 Development of Learning Media based on Religious Moderation
9. Unit 9 Object-Based Media Development
10. Unit 10 Audio Visual-Based Media Development
11. Unit 11 Interactive Media Development / Multimedia
12. Unit 12 Development of Blended/ Hybrid Learning Media
13. Unit 13 Media Simulation in Learning

F. Introduction

Using relevant learning media in the classroom can optimize the learning process. For lecturers, Media helps concrete concepts or ideas and helps motivate participants to learn actively. For students, the media can be a bridge to think critically and do. Thus the media can help the task of lecturers and students achieve the specified basic competencies. For the learning media to be used properly, lecturers need to know their learning needs and the problems students face about the material to be taught.

The media needs to be developed based on relevance, basic competence, material, and student characteristics. Lecturers can act as creators, creating and utilizing the right, efficient, and fun media for students. However, in its use in the classroom, it needs to be emphasized that the students should take advantage of the learning media.

According to the behaviouristic paradigm, learning transmits knowledge from expert to novice. Based on concept, the role of the lecturer is to provide and pour as much information as possible to students. The lecturer perceives himself as successful in his work if he can pour as much knowledge as possible on the students. The students are perceived as successful if they submit to receiving the knowledge that the lecturer has poured into them.

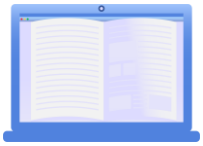
Such perception-oriented educational practices are indoctrinated, so they will impact the cognitive silting of students, hinder the development of student creativity, and limit students' chances of achieving higher-order thinking. Lately, the concept of learning uses the paradigm of constructivism. According to constructivist understanding, learning results from its construction (learner) as a result of its interaction with the learning environment. The construction of understanding in learning events can be through assimilation or accommodation. In essence, assimilation and accommodation occur as the learner attempts to perfect or change the knowledge in his mind.

The knowledge that the learner has possessed is often also termed a preconception. The process of assimilation occurs when there is a compatibility between the new experience and the learner's preconceptions. Meanwhile, accommodation is a process of adaptation, evolution, or change due to the learner's new experience that does not correspond to his preconceptions.

Based on the constructivist learning paradigm, the principle of media-mediated instruction occupies a fairly strategic position to realize learning events optimally. Optimal learning events are one of the indicators to realize optimal student learning outcomes as well. Optimal learning outcomes are also one of the financers of quality educational outcomes. Quality education requires the resources of lecturers who are able and ready to play a professional role in the campus environment and society.

Technological advances are so massive, encouraging the field of education to improve in implementing the learning process. One of the uses of technology in education is hybrid learning. Hybrid learning is often equated with blended learning. Hybrid/Blended Learning is learning integrating online classroom activities with planned and meaningful face-to-face learning activities and considering the portion of implementation.

The teaching media course is a coolie course that integrates theory and practice. This course aims to give students creativity and innovation in designing teaching media so that when students enter the world of education, they already have the provisions to pursue by applying the media that has been



made. Regarding the teaching materials of the teaching media course, it is stated that for the teaching course, he should have qualified in the aspects of usefulness, appropriateness, and feasibility. This study seeks to design a model of teaching materials that meet these requirements and will integrate the values of religious moderation into it.

CHAPTER
II

THE CONCEPT OF MEDIA AND LEARNING RESOURCES

A. Introduction

This chapter presents the concept of learning media and learning resources. Learning media consists of the notion of learning media, the nature of learning media, and the benefits of learning media. The concept of learning resources consists of understanding learning resources, the nature of learning resources, and the benefits of learning resources. Learning media are tools for delivering messages from communicators (lecturers) to communicants (students). If the learning media can be adequately developed, the learning objectives are expected to be achieved effectively and efficiently.

B. Learning Objectives

After attending this lecture, students can explain the meaning of learning media, the nature of learning media, the benefits of learning media, the meaning of learning resources, the nature of learning resources, and the benefits of learning resources.

C. Learning Materials Learning

1. Media Concepts

a. Understanding Learning Media

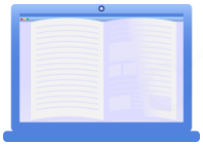
Before discussing other learning media, it is necessary to first know what is meant by media in general. The word media (singular form medium) comes from Latin, which means between or intermediary, which refers to something that can connect information between the source and recipient of information. Heinen, Molenda, Russell, and Smaldino (Heinich et al. 2002) define media as a means of communication. For example, print media, audio, visual, video, objects, and people (Yaumi and Damopolii 2015).

Meanwhile, communication channels are tools that carry messages from one individual to another (Rogers and M. 2003). Furthermore, the media are also seen as forms of mass communication involving symbol systems and production and distribution equipment (Palazon and Maria 2000). So, the media is a communication tool that can carry messages from the giver to the recipient of the message.

In communication, the term media is often attached to the word mass, such as the word mass media, whose manifestation can be seen in newspapers, magazines, radio, video, television, computers, and the Internet. Advances in information technology and the media have become exciting and in demand in almost all disciplines, although with slightly different names. For example, telecommunications media, propaganda media, computer mediation language learning, learning media, etc. Specifically, regarding learning media as the focus of the study in this paper, we need to ponder the question, "does the media affect learning outcomes?

In a simple view, many people argue that even though various sophisticated media have been designed with all their characteristics for learning needs, as long as the instructor, teacher, tutor, or instructor cannot function as they should, it will not have a significant impact on student achievement. On the other hand, even though they only use simple media such as textbooks, chalk, and the instructor himself as a medium, student achievement can still be improved. Like the traditional view, Clark in Hastings and Tracey (Hastings et al., n.d.) argues that the media is only a vehicle that conveys learning but does not affect student achievement; the media is nothing more than a truck that transports food but does not bring changes in our nutrition.

Clark's statement was later refuted by Kozma (RB 1991) who argues that the media contributes significantly to the learning process and outcomes and can generate motivation and passion for learning. Therefore, media and learning are significant in effectively and efficiently creating learning conditions. Thus, it can be said that the better the media is designed for learning needs, the more effective and efficient the learning process will be, and the better student achievement will be. Vice versa, the lower the attention to designing media based on objectives, materials, and learning methods, the more ineffective and



efficient the learning is carried out and ultimately causes student learning outcomes to decline.

More specifically, Scanlan (Scanlan and L n.d.) suggests that media can facilitate learning and improve understanding of learning materials. It can be observed that the media can:

Attract attention, increase interest in learning, develop a learning climate, and create acceptance of ideas and views.

b. The Nature of Learning Media

In its early development (and is still being followed), the term learning media only revolves around teachers, chalk, and textbooks. Learning media is more likely to be seen as a tool to convey learning. Reiser and Dempsey (Reiser et al. 2012) view learning media as physical equipment to present learning to students. This definition emphasizes that any physical equipment used to present learning, whether textbooks, visual equipment, audio, computers, or other equipment, is classified as learning media.

Learning media includes all physical equipment and materials used by instructors, lecturers, teachers, tutors, or other educators in carrying out learning and facilitating the achievement of learning objectives. The learning media in question include traditional media consisting of chalk, handouts, diagrams, slides, overhead, tangible objects, video recordings, films, and advanced media such as computers, DVDs, CD-ROMs, the Internet, and interactive video conferencing (Scanlan and L n.d.) Gagne and Briggs (1979: 175) also say that the actual mention of the media used in learning media does not have a standard meaning. Sometimes the media refers to the following terms:

1. Sensory mode is sensory organs driven by learning messages (eyes, ears, etc.).
2. Channel of communication: the senses used in communication (visual, auditory, tactile, kinesthetics, olfactory, and so on).

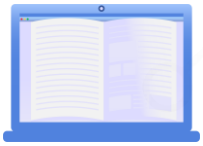
3. Type of Stimulus: equipment but not a communication mechanism, namely spoken words (original voice or recording), presentation of words (written in books or still written on the blackboard), moving pictures (video or film).
4. Media: physical communication equipment (books, printed materials such as writing, programmed scripts, computers, slides, films, videos, and so on).

Although some views tend to distinguish the terms, many also argue that what is meant by learning media is all the term's components. From a historical perspective, media use for learning purposes can be traced back to the first decades of the twentieth century (Saettler, 2004). At that time, several museum schools emerged that functioned as central administrative units for visual learning, such as slides, films, printed materials, diagrams, and any materials used for learning needs. Thus, what is meant by learning media is any physical equipment (printed materials, texts, tangible objects, audio, visual, video, Internet, and various interactive media using DVDs and CD Rooms) that are designed to convey messages. Learning messages to create effective and efficient learning conditions.

From this definition, all equipment, including used goods designed for learning needs, is called learning media. In other words, learning media are all software and or hardware that function as equipment used to channel learning messages from the sender to the recipient of the message so that it can stimulate the thoughts, feelings, concerns, and interests of students, so the effectiveness and efficiency of the learning process occur.

c. The Urgency of Media in Learning

By understanding the concept of media and its role as one of the components in learning, the position of the media in planning and implementing learning cannot be viewed only as a tool that should be ignored when the media is unavailable. It should be understood that the



position of learning media can significantly contribute to the achievement of the expected learning objectives.

Thus the function of learning media is an integral part of the learning process and relies on objectives, materials, approaches, methods, and evaluation of learning. Asghar (Ashar and Rajendra 2011, 12) describes four rational reasons why learning media is essential to use in learning, namely (1) improving the quality of learning, (2) demanding a new paradigm, (3) market needs, and (4) global education vision.

1) **Improving the Quality of Learning**

A critical factor in building the quality of education is the quality of educators in designing and implementing learning. Teachers should have adequate skills to design, develop, and utilize learning media to increase students' interest, attention, and motivation to learn. With increased motivation and interest in learning, it is expected to be able to digest and accept learning easily. However, the skills of teachers in Indonesia are generally still low, and they tend to prefer a teacher-based approach by applying the lecture method rather than an approach to students by applying learning activities.

Rapidbe (Rapid n.d.) describes the impact of learning activities on improving students' abilities as follows:

- 10% of what is read
- 20% of what is heard
- 30% of what is seen
- 50% of what is seen and heard
- 70% of what is written and said
- 90% of what is said and done.

From the percentage of differences in understanding obtained through the various senses mentioned above, the media design can be directed to optimize the use of learning media by reading, listening, seeing, writing, speaking, and implementing. This means that audio, visual, video, and interactive media, as previously described, need to be developed to increase student's knowledge, understanding, and creativity in acquiring knowledge.

2) Demands for a New

Paradigm, The new paradigm of education requires that educators play a role not only in transferring knowledge to students or simply memorizing but also as facilitators, learning designers, mediators, and even managers in the classroom. Students are expected to memorize, understand, and master the learning content and to apply, analyse, evaluate, and even create something needed in the real world. Merrill's learning principles, which include demonstration, application, task-based principles, activation, and integration, need to be used to build knowledge from the real world, as shown in the figure below.

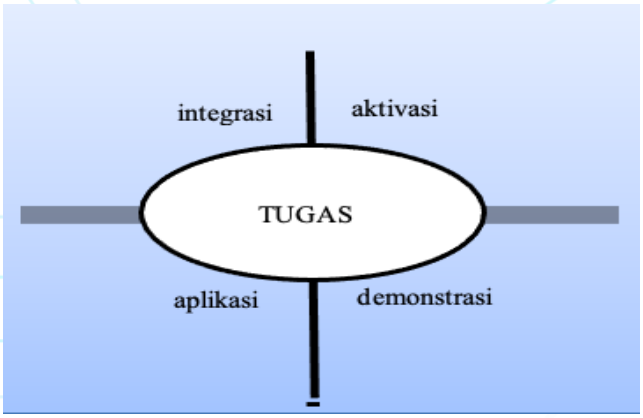


Figure 1. Merrill Learning Principles

The five phases are translated into principles, such as (1) learning is facilitated when students are involved in task-cantered

learning strategies, and (2) learning is facilitated when knowledge is activated as a basis for acquiring new knowledge. (3) learning is facilitated when new knowledge is demonstrated to students, (4) learning is facilitated when students apply new knowledge, and (5) learning is facilitated when new knowledge is integrated into the learner's world. Learning media must be adapted to the task so that it is easy to activate, do, integrate, and demonstrate.

3) Market Needs

The use of learning media must be under the demands and needs of the market so that the graduates produced can keep up with the times. Educational institutions should design learning media by reviewing and understanding information and communication technology development today. Educators at educational institutions often lose fast with the rapid flow of technological progress. As a result, the resulting alumni are unable to compete in the job market, which causes more of them to be unemployed. It is where students must be equipped with learning that utilizes various learning resources, teaching aids, and the latest learning media.

4) Global Education Vision

Entering the 21st century today, traditional education models that rely on face-to-face meetings show a significant shift, where online education (networks) has brought about challenging changes. The birth of new tendencies such as home schooling, self-study, and distance learning has become a matter of pride and is seen as the most prestigious education model today.

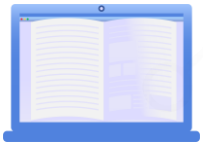
Media Facebook, Twitter, blogs, YouTube, and various game facilities seem to be a new tradition in the world of school-age children today. The house that functions as a school is a new trend in most countries and has even been felt in several cities in Indonesia today.

Educational financing such as books, uniforms, transportation costs, higher tuition fees or private tutoring, the politicization of less pro-community education, and the burden of tasks such as homework, local and national exams, unfair assessments, and various other educational problems bring boredom to society. On the other hand, Internet facilities such as the growth of internet cafes, cafe nets, and even RT-nets have provided unique conveniences for the community, where financing is very affordable for all people. Home schooling, self-study, and distance learning are the right choices for some people today. In addition, curricula, teaching materials, and international standard exams specially designed for children who choose to home school are available on various Internet sites. It is even easier to get international recognition.

The latest technology must be designed so that it is easy for teachers. Teacher knowledge and skills must constantly be improved, and various learning facilities, by utilizing various sources, must always be available to avoid low public trust in educational services provided in schools.

d. Benefits of Learning Media

The learning process is a communication process and takes place in a system, so the learning media occupies an essential position as one of the components of the learning system. Without the media, communication will not occur, and the learning process as a communication process will also not be able to take place optimally. Learning media is an integral component that cannot be separated from the learning system. The position of learning media as a communication component (Daryanto 2011) is shown in Figure 2.



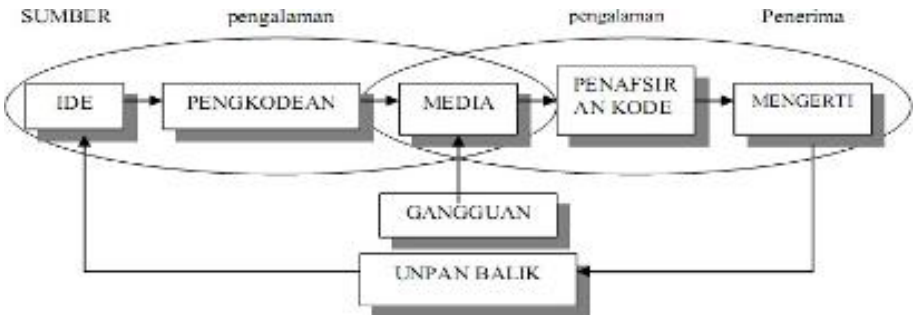


Figure 2. Position of Media in Learning Systems

From Figure 2, the communication process will run effectively and efficiently when the code interpretation takes place quickly and precisely. This can happen if the interference/barriers in communication are minimized. The role of the media in learning is to reduce obstacles in the learning process so that maximum learning outcomes are achieved. In the learning process, the media carries information from the source (teacher) to the recipient (student). At the same time, the method is a procedure to assist students in receiving and processing information to achieve learning objectives.

In general, the benefits of learning media are facilitating interaction between teachers and students so that learning activities are more effective and efficient. The selection of learning methods significantly affects the learning media used. This means that the selection of learning media must be based on the learning method used. Thus, using learning media can significantly benefit the successful classroom implementation of teaching and learning activities.

Sudjana and Rivai (Sudjana and Rivai 1992) suggested the benefits of learning media in the student learning process, namely:

1. Learning will attract more students' attention to foster learning motivation.

2. Learning materials will be more explicit in meaning so that students can better understand them to enable them to master and achieve learning objectives.
3. Teaching methods will be more varied, not merely verbal communication through the utterance of words by the teacher, so that students do not get bored and the teacher does not run out of energy, primarily if the teacher teaches every lesson.
4. Students can do more learning activities because they do not only listen to the teacher's description but also other activities such as observing, demonstrating, exhibiting, etc.

In interaction activities between students and the environment, the function of the media can be identified based on the advantages of the media and the obstacles that may arise in the learning process. Three advantages of media capabilities (Daryanto 2011) are as follows:

1. Fixative ability, meaning that it can capture, store, and re-display an object or event. With this capability, objects or events can be drawn, photographed, recorded, filmed, then stored, and when needed, can be shown and observed as in their original state.
2. Manipulative ability, meaning that the media can re-display objects or events with various kinds of changes (manipulation) as needed, for example, changing their size, speed, colour, and the presentation can also be repeated.
3. Distributive ability means the media can reach a large audience in one simultaneous presentation, for example, TV or radio broadcasts.

According to Ashby,(Miarso and Yusufhadi 1985) the development of learning media has brought about four revolutions in the world of education. The first revolution was when parents let their children study; the second revolution occurred with the use of written language as the main of education; the third revolution arose with the availability of print media, which was the result of the invention of the printing technique,

and the fourth revolution took place with the widespread of electronic communication media. Today we live in an information age marked by the availability of more varied information, the spread of information that is increasingly widespread and instantaneous, and the availability of information in various forms quickly. All efforts to collect, process, store, and present information always use the media, so this era can also be called the media environment.

2. The Concept of Learning Resources

a. Definition of Learning Resources

Resources are everything that exists around the learning environment that functionally can be used to help optimize learning outcomes. Optimizing learning outcomes can be seen not only from learning outcomes (output) but also from student interactions with various kinds of learning resources that can stimulate students to learn and accelerate understanding and mastery of the fields of knowledge they are studying.(Sanjaya 2008)

Barbara B. Seels and Rita C. Richey, in the book Learning Technology, Definitions, and Areas, say that what is meant by sources are sources that support learning, including service systems, learning materials, and the environment. Learning resources are not only limited to materials and tools used in the learning process but also personnel, costs, and facilities. Learning resources include anything that can be used to help everyone to learn and display their competence.

AECT (Association for Education and Communication Technology) states that learning resources are all sources in the form of data, people, and certain forms that can be used by students in learning, either separately or in combination, to make it easier for students to achieve learning goals or achieve specific competencies. Learning resources are materials used and needed in the learning process, which can be in the form of textbooks, print media, electronic media, resource

persons, the surrounding environment, and so on, that can increase the level of activity in the learning process.

According to Abdul Majid(Majid 2011) in his book Learning Planning, learning resources are all places or the surrounding environment, objects, and people that contain information that can be used as a vehicle for students to carry out the process of changing behaviour. Learning resources are available around a functioning learning environment. to help optimize learning outcomes. Optimization of learning outcomes can be seen not only from learning outcomes but also from the learning process in the form of student interaction with various learning resources that can provide stimulation to learn and accelerate understanding and mastery of the field of knowledge being studied.

Teaching and learning as a process is a system that cannot be separated from other components that interact with each other in it. One of the components in the process is learning resources. Learning resources can benefit the teaching and learning process, either directly or indirectly, wholly or partially. Learning resources in a narrow sense are, for example, books or other printed materials. This definition is still widely used today by most teachers. For example, in a teaching program usually prepared by teachers, there is a component of learning resources, and in general, it will be filled with recommended textbooks or compulsory books. The definition of learning resources is as narrow as all teaching facilities that can present only auditory or visual messages, such as OHP, slides, videos, films, and other hardware.

A broader understanding is given by Edgar Dale, who states that experience is a source of learning. Learning Resources, in this sense, become very broad in meaning, as broad as life itself, because everything experienced is considered a source of learning as long as it brings experiences that lead to learning. Learning is essentially a process

of changing behaviour towards a perfect direction by specific goals formulated previously.

Edgar Dale(Rapid n.d.) argues that experiences that can provide learning resources are classified according to a certain level in the form of a cone of experience. The grading of these types of experiences is arranged from the concrete to the abstract. As has been described, learning resources are all resources that can be used to make it easier for people to learn.

In developing learning resources, there are two kinds, namely;

1) Learning resources designed or intentionally created or used to assist teaching and learning are commonly called learning resources by design (designed learning resources). Learning resources of this kind are often called learning materials. For example, textbooks, modules, brochures, encyclopaedias, audio programs, sound slide programs, films, videos, slides, film strips, and transparencies (OHT). All this hardware is deliberately designed for teaching purposes.
2) Learning resources that make it easier for someone to learn in the form of all kinds of learning resources around our environment are already available and live to be used. These learning resources are not designed for teaching activities but can be found, selected, and used for learning purposes. This learning resource is called learning resources by utilization. For example, parks, markets, shops, museums, zoos, reservoirs, rice fields, terminals, newspapers, television broadcasts, films, community leaders, government officials, experts, religious leaders, sportsmen, and so on in the surrounding environment can be utilized. For study purposes.

b. The Nature of Learning Resources

Learning resources are all kinds of materials that can be used to provide information and various skills to students and teachers. Likewise, game tools are a source of learning. Other learning resources

are reference books, story books, pictures, resource persons, cultural objects or goods, unique places, and others.

Learning resources are all sources in the form of data, people, and certain forms that can be used by students in learning, either separately or in combination, to make it easier for students to achieve learning goals or specific competencies.

In a broad sense, learning resources are all kinds of sources outside of a person (students) and allow (facilitate) the learning process. The experts have expressed opinions about the meaning of learning resources as follows:

1. According to Yusufhadi Miarso, (Miarso and Yusufhadi 1985) everything that includes messages, people, materials, tools, techniques, and the environment, either individually or in combination, can enable learning.
2. Edgar Dale (Rapid n.d.) suggests learning resources can be used to facilitate one's learning.
3. According to Rohani, learning resources are all kinds of sources that exist outside of a person (students) and allow (facilitate) the learning process.
4. Association Educational Communication and Technology (AECT) states that learning resources are all sources in the form of data, people, and certain forms that students in learning can use. Either separately or in combination, to make it easier for students to achieve learning goals.

From some of the opinions stated above, it can be concluded that what is meant by learning resources is everything that comes from outside a person that can allow the learning process to occur.

c. Benefits of Learning Resources

The function of learning resources in learning is to provide opportunities to gain knowledge and enrich children by using various

tools. Books, resource persons, places, and all things increase children's knowledge.

Another function of learning resources is improving children's language development. The trick is to talk and communicate with resource persons who can develop children's views on various aspects of life. Thus, children not only get information from the teacher but also from other speakers who are presented in class.

Learning resources are designed to have specific instructional goals. Therefore, the purpose and function of learning resources are also influenced by each type of variation of learning resources used.

In addition, learning resources also have the following functions:

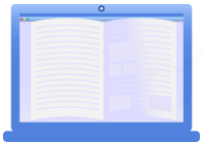
1. Increasing learning productivity by accelerating the pace of learning, helping teachers use time better, and reducing the burden on teachers in presenting information so that they can foster and develop a passion.
2. Providing the possibility of more individual learning by reducing rigid and traditional teacher control and providing opportunities for students to develop according to their abilities.
3. Provide a more scientific basis for learning by designing a more systematic learning program and developing research-based teaching materials.
4. Strengthen learning by increasing the ability of learning resources to present information and materials more concretely.
5. Enables instantaneous learning, which reduces the gap between verbal and abstract learning with concrete realities providing direct knowledge.
6. Enables a broader learning presentation by presenting information that can penetrate geographical boundaries.
7. Provide opportunities to gain knowledge and enrich children by using various tools, books, resource persons, and all things that increase children's knowledge.

8. Improving children's development in language is by communicating with resource persons.
9. Means of developing acquisition processing skills
10. Strengthen the relationship between students and the environment,
11. Develop students' experience and knowledge,
12. Make the teaching and learning process more meaningful.

D. Enrichment

Answer the questions below correctly and correctly!

1. Explain the essence of media and learning resources in a learning construction!
2. Explain why media and learning resources are essential for an education system.



CHAPTER III

LEARNING TECHNOLOGY AND MEDIA

A. Introduction

This chapter presents three main topics: the history of technology in instructional media, the concept of technology in instructional media, and the types of technology in instructional media. Each topic will be explained in more detail into several subtopics related to the topic.

B. Learning Objectives

After attending this lecture, students can explain the history of technology in learning media, the concept of technology in learning media, and the types of technology in learning media.

C. Learning Materials

I. History of Technology in Learning Media

Technology in learning media develops along with the progress of human civilization. Starting from the practice of education and the audio-visual communication movement. So far, technology in learning media is often only interpreted as equipment, teaching media, or a means of delivering teaching materials. Even more than that, technology in learning media is a combination of three interrelated elements: media in learning, learning psychology, and systems approach in education.

James Finn proposed audio-visual communication as technology in learning; this idea continues to be developed along with the passage of technology in the era of globalization and is supported by research, theory, and practice constantly being developed. Finn's ideas about the integrity of the system and the teaching process explain and expand on the earlier ideas proposed by Edgar Dale (the theory of cones of experience).

II. Definition of Technology in Learning Media

The definition of technology in learning media will always change along with existing technological advances. This can be proven by developing the definition of technology in learning media. According to the Association for Educational Communications Technology (AECT) 1963, "Audio-visual communication is a branch of educational theory and practice that is primarily

concerned with designing, and using messages to control the learning process, including activities:

1. Study the weaknesses and strengths of a message in the learning process;
2. Structuring and systematizing people and instruments in the educational environment, including planning, production, selection, management, and utilization of components and the whole learning system. The practical goal is to use each method and medium of communicating effectively to help develop the potential of learners to the fullest".

Although it has not been mentioned as technology in learning media, the above definition is believed to be the initial foundation for developing technology in learning media that is relevant to technological developments. The definitions that have been mentioned have been revised many times to suit changes and appropriate technological advances. Among them can be seen as follows:

In 1972, AECT attempted to revise the existing definition (1963, 1970, 1971) by providing the following formulation: "Educational Technology is a field concerned with facilitating learning in humans through systematic efforts in identification, development, organization, and utilization of various kinds of learning resources as well as with the management of the whole process." This definition is based on the spirit of defining audio-visual communication as a field of study. This provision develops the idea that educational technology is a profession.

AECT 1977 definition, "Educational technology is a complex integrated process that includes people, procedures, ideas, tools, and organizations to analyse problems, design, implement, assess and manage problem-solving in all aspects of human learning.

Definition in 1977, AECT seeks to identify as a theory, field, and profession. The previous definition, except for 1963, did not emphasize educational technology as a theory.

AECT Definition 1994. "Learning Technology is theory and practice in the design, development, utilization, management, and evaluation of processes and resources for learning."

From the development of the definition according to AECT, it can be concluded that technological developments must also go hand in hand with the development of education through technology in learning media. The whole process of using technology in learning media must be an essential concern for various parties because it involves technological progress itself; besides that, according to the definition mentioned above, when observed in detail, technology in learning media undergoes a metamorphosis towards perfection. Initially only seen as a tool, then led to a system that continues to be developed.

Behind it all, the development of technology in learning media is also a severe problem for several countries, especially developing countries. The obstacles that arise in the development of learning media technology in developing countries are usually about equitable development. It is undeniable that equitable development also influences the development of learning media technology. Therefore, the support and cooperation of various parties will benefit future developments. The effort will undoubtedly be considerable, but the result is progress for the country.

According to the 1994 AECT definition, there are five areas of work in Learning Technology: Design, Development, Utilization, Management, and Assessment. These five things are the area (domain) of the field of Learning Technology. Below will be described the five areas, with their sub-categories and related concepts:

a. Design Area

The design here is a process to determine learning conditions to create strategies and products. The design area stems from the learning psychology movement, mainly inspired by the thinking of B.F. Skinner (1954) on the theory of programmed learning (programmed instructions). Furthermore, in 1969, Herbert Simon's thoughts, who discussed design

prescriptions, also sparked a study of design. The establishment of programmatic and learning materials design centres, such as the "Learning Resource and Development Centre," in 1960 further strengthened design study. In the 1960s and 1970s, as Director of the Learning Resource and Development Centre, Robert Glaser wrote and spoke about learning design as the core of Educational Technology. The application of systems theory in learning completes the basis of the psychology of learning. Through James Finn and Leonard Silvern, the learning systems approach gradually developed into a methodology and began to incorporate ideas from the psychology of learning. Attention to message design grew during the late 1960s and early 1970s. Robert Gagne's collaboration with Leslie Briggs has combined his expertise in learning psychology with a talent in systems design that brings the concept of learning design to life. The Design Area covers at least four primary areas of theory and practice, namely:

(1) Learning System Design;

namely, an organized procedure, which includes the following steps: (a) analysis (the process of formulating what will be studied); (b) design (a process of describing how to study it); (c) development (the process of writing and producing or producing study materials); (d) implementation/application (utilization of materials and strategies) and (e) assessment (the process of determining learning accuracy). Learning System Design is usually a linear and interactive procedure that demands accuracy and stability. In order to function as a tool for mutual control, all these steps must be completed. In Learning System Design, the process is as important as the product because trust in the product is based on the process.

(2) Message Design;

That is, planning to engineer the physical form of the message so that communication occurs between the sender and receiver, taking into account the principles of attention, perception, and

capture. Fleming and Levie limit messages to signal patterns or symbols that can modify cognitive, affective, and psychomotor behaviour. Message design deals with micro things, such as visual material, sequences, separate pages, and screens. The design must be specific about the media and the learning task. This implies that message design principles will differ depending on the type of media, whether static, dynamic, or a combination of the two (e.g., a portrait, film, or computer graphic). Also, the learning task about concept formation, attitude development, skill development, learning strategies, or memorization

(3) Learning Strategy;

Namely specifications for selecting and sequencing learning events or learning activities in a lesson. The theory of learning strategies includes learning situations and learning/teaching components. A designer uses a theory or component of a learning strategy as a principle of learning technology. Applying a learning strategy depends on the learning situation, the nature of the material, and the desired type of learning.

(4) Characteristics of Learners.

Namely, aspects of the background of the learner's experience affect the learning process's effectiveness. Characteristics of learners include the socio-psycho-physical state of the learner. Psychologically, what needs attention from the characteristics of students are related to their abilities, potential and fundamental skills, and personalities, such as attitudes, emotions, motivations, and other personality aspects.

b. Development Area

Development is the process of translating design specifications into physical form, which includes (1) printing technology, (2) audio-visual technology, (3) computer-based technology, and (4) integrated technology. The development area is rooted in media production. Over the years, this

change in media capabilities has resulted in regional changes. Although the development of textbooks and other learning aids (printing technology) preceded films, the appearance of films is a milestone in the audio-visual movement to the current era of Learning Technology. In the 1930s, films began to be used for learning activities (audio-visual technology). Many types of materials were produced during World War II, especially films for military training. After the war, television was a new medium for educational purposes. During the late 1950s and early 1960s, programmatic learning materials began to be used for learning. Around the 1970s, computers began to be used for learning, and simulation games became fashionable in schools. During the 1098s, theory and practice in the field of computer-based learning developed like mushroom, and around the 1990s, computer-based integrated multimedia was from this area.

Within the development area, a complex relationship between technology and theory drives message design and learning strategies. The area of development occurs because:

a. Content-driven messages
b. theory-driven learning strategies,
c. The physical manifestation of technology – hardware, software, and learning materials.

c. Use Area

Utilization is the activity of using processes and resources for learning. The utilization function is essential because it discusses the relationship between the learner and the learning material or system. Those involved in utilization have the responsibility to match learners with specific materials and activities, prepare learners to interact with the selected materials and activities, guide activities, provide an assessment of the results achieved by learners, and incorporate them into appropriate organizational procedures. Sustainable.

The area of utilization may be the area of Learning Technology, preceding the systematic design and production of instructional media.

This area dates back to the visual education movement in the first decades of the 20th century, with the establishment of museums. In the early years of the 20th century, teachers began to make efforts to use theatrical films and short films on the subjects of learning in the classroom.

Among the oldest formal studies on media applications in education is the study by Lashley and Watson on using World War I military training films (on the prevention of venereal disease). After World War II, the audio-visual learning movement organized and promoted audio-visual materials, thereby expanding the supply of learning materials and encouraging new ways of helping teachers. During the 1960s, many schools and universities established many learning media centres.

Dale's 1946 work entitled Audio-visual Materials in Teaching, in which he tried to provide a general rationale for the selection of appropriate learning materials and activities. In 1982, the book Instructional Materials and New Technologies of Instruction was published by Heinich, Molenda, and Russell. This book proposes the ASSURE model, used as a reference procedure for designing media use in teaching. These steps include: (1) Analyse learners (analyse learners); (2) State Objective (formulating objectives);(3) Select Media and Materials (selecting media and materials); (4) Utilize Media and Materials (using media and materials), (5) Require Learner Participation (involving students); and (6) Evaluate and Revise (assessment and revision).

d. Management Area

Management includes controlling Learning Technology through planning, organizing, coordinating, and supervising. The management area starts with media centre administration, media programs, and media services. The fusion of libraries with media programs produces school media centres and experts. These school media programs combine printed and non-printed materials, resulting in increased use of technological resources in the curriculum.

With the increasing complexity of management practices in this learning technology field, general management theory has begun to be applied and adapted. Project management theory is starting to be used, especially in learning design projects. Techniques or ways of managing projects are continuously being developed, borrowing from other fields. Each new development requires a new way of managing it.

The success of a distance learning system depends on its management due to the spread of locations. With the birth of new technology, it is possible to provide new ways to obtain information. As a result, knowledge of information management becomes very potential. The theoretical basis of information management comes from the information science discipline. Information management opens up many possibilities for instructional design, particularly in developing and implementing self-designed curricula and learning.

1) Project Management

Project Management includes planning, monitoring, and controlling design and development projects. Project management differs from the traditional line and staff management in that: (a) project staff may be new, i.e., short-term team members; (b) project managers typically do not have long-term authority over people due to the temporary nature of their duties, and (c) project managers have greater control and flexibility than is typical for line and staff organizations.

Project managers are responsible for planning, scheduling, and controlling the learning design function or other types of projects. The project manager's role usually addresses project threats and advises internal changes.

2) Resource Management

Resource Management includes planning, monitoring, and controlling support systems and essential resource services. Resource management is essential because it regulates access

control. Understanding sources can include financial personnel, raw materials, time, facilities, and learning resources. Learning resources include all the technologies described in the development area. Cost-effectiveness and justification for effective learning are two essential characteristics of resource management.

3) Delivery system management

The management of the delivery system includes planning, monitoring, and controlling "how the distribution of learning materials is organized." It is a combination of the medium and the method used in presenting learning information to learners.

Delivery system management pays attention to product issues such as hardware/software requirements and technical support to users and operators. This management also pays attention to process issues such as guidelines for designers and instructors, and trainers. Delivery management decisions often depend on the sourcing management system.

4) Information management

Information management includes planning, monitoring, and controlling how to store, transmit/transfer or process information to provide resources for learning activities. The importance of information management lies in its potential to revolutionize curriculum and to learn design applications.

e. Assessment Area

Assessment is a process of determining the adequacy of learning and learning, including: (1) problem analysis, (2) benchmark reference measurement, (3) formative assessment, and (4) summative assessment.

In assessment, a distinction is made between program, project, and product assessments. Program assessment – an evaluation that assesses educational activities that provide services on an ongoing basis and are often involved in curriculum development. For example, an assessment for

a reading program in a school area, a unique education program from a local government, or a continuing education program from a university.

Project appraisal – evaluation to assess specifically funded activities to perform a specific task over time. For example, a 3-day workshop on behavioural goals. The critical difference between programs and projects is that programs are expected to last indefinitely, whereas projects are usually expected to be short-term. Projects that are institutionalized in reality become programs.

Assessment of materials (learning products) – evaluations that assess the goodness or benefit of content concerning physical objects, including books, curriculum guides, films, tapes, and other learning products.

1) Problem Analysis includes determining the nature and parameters of the problem by using information gathering and decision-making strategies. Skilled evaluators have long argued that careful assessment begins when the program is formulated and planned. No matter how well people suggest, programs directed at goals that are not/less acceptable will be judged to have failed to meet the needs. Thus, this assessment activity includes identifying needs, determining the extent to which the problem can be classified as learning, identifying learners' barriers, sources, and characteristics, and determining goals and priorities (Seels and Glasgow, 1990). Needs are defined as "the gulf between "what is" and "what ought to be" in terms of outcomes (Kaufman, 1972).

   A needs analysis was conducted for adequate program planning.

2) Benchmark Reference Measurement includes techniques to determine the learning ability to master predetermined material. The benchmark reference assessment provides information about a person's mastery of knowledge, attitudes, or skills related to learning objectives. Success in the benchmark reference test means being able to carry out certain conditions, usually specified, and those who can achieve or exceed the minimum score are declared to

pass. Benchmark reference measurements tell students how far they can reach the specified standard.

3) Formative and Summative Assessment Formative and Summative Assessment; relates to the collection of information on the adequacy and use of this information as a basis for further development. Summative assessment is concerned with gathering information about adequacy for decision-making in terms of utilization. Formative assessment is carried out during the development or improvement of programs or products (or people and so on). These assessments are conducted for staff within the program agency and usually remain internal; however, these assessments can be carried out by internal or external evaluators or (better still) a combination. The difference between formative and summative is well summed up in an allusion from Bob Stake "When the cook tastes the soup, it is formative. When the guests taste the soup, it is summative.

Summative assessments are carried out after completion and for the benefit of external parties or decision-makers, for example, funding agencies or potential users. However, this can be carried out by either internal or internal evaluators for a joint venture. For credibility reasons, it is better to involve an outside evaluator than a formative assessment. It should not be confused with outcome assessment, which only evaluates the results, not the process. This can be either formative or summative.

The method used in formative assessment is different from summative assessment. Formative assessments rely on technical reviews, tutorials, and small or large group trials. Data collection methods, such as observation, interviews, and short tests, are often informal. In contrast, summative assessment requires more formal data collection procedures and methods. Summative assessment often uses comparative group studies in quasi-experimental designs.

III. Types of Technology in Learning Media

Today learning media can be developed from various types of technology. Below will be explained several types of use of technology as a learning medium.

a. Print Technology

Print Technology is a way of producing or conveying materials, such as books, and static visual materials, mainly through mechanical or photographic printing. This technology forms the basis for developing and utilizing most other learning materials. The result of this technology is in the form of a mold. Text in computer display is an example of using computer technology for production. If the text is printed as "prints" for learning purposes, it is an example of delivery in the form of printing technology.

The two components of this technology are verbal and visual text materials. The development of these two types of learning materials is highly dependent on the theory of visual perception, reading theory, information processing by humans, and learning theory.

In particular, print/visual technology has the following characteristics:

1) Text is read linearly, while visuals are recorded according to space
2) Both usually provide passive one-way communication.
3) Both are static visuals
4) Its development is very dependent on linguistics and visual perception principles.
5) Both are learner-centred
6) Information can be organized and restructured by the user.

b. Audio-Visual Technology

Audio-Visual Technology is a way of producing and delivering material using electronics and equipment to present audio and visual messages. Audio-visual learning can be recognized easily because it

uses hardware in the teaching process. Audio-visual equipment enables the projecting of live images, playback of sound, and viewing of large visuals. Audio-visual learning is defined as the production and use of materials related to visual and auditory learning that do not always have to rely exclusively on understanding words and similar symbols.

In particular, audio-visual technology tends to have the following characteristics:

1) is linear
2) Display dynamic visuals
3) Typically used in a predetermined way by the designer/developer.
4) Tends to be a form of physical representation of natural and abstract ideas.
5) Developed based on the principles of behavioural and cognitive psychology.
6) Often centred on the teacher, paying less attention to the learning interactivity of the learner.

c. Computer-Based Technology

Computer-Based technology is a way of producing and delivering materials using devices based on microprocessors. Computer-based technology displays information to students through displays on the monitor screen. Various computer applications are usually called "computer-based instruction (CBI)", "computer-assisted instruction (CAI"), or "computer-managed instruction (CMI)".

These applications were almost entirely based on behavioural theory and programmed learning but are now more heavily on cognitive theory. These applications can be:

1) Tutorial, central learning is given,
2) Practice and repetition to help learners develop fluency in previously studied material,

3) Games and simulations to provide opportunities to use newly learned knowledge; and
4) A data source allows students to access the data structure through an externally determined data access protocol.

Computer technology, both in the form of hardware and software, usually has the following characteristics:

1) Can be used randomly, in addition to linear
2) Can be used according to the learner's wishes, in addition to the way the developer designs.
3) Ideas are usually expressed abstractly using words, symbols, or graphics.
4) Cognitive science principles are applied during the development
5) Learning can be learner-centred with a high level of interactivity.

d. Integrated Technology

Integrated Technology is a way to produce and deliver materials by combining several types of computer-controlled media. The specialty displayed by this technology, especially using a computer with high specifications, is the existence of high learner interactivity with various learning resources.

Learning with this integrated technology has the following characteristics:

1) Can be used randomly, in addition to linear
2) Can be used according to the learner's wishes, in addition to the way the developer designs.
3) Ideas are often presented realistically in the context of the learner's experience, relevant to the learner's condition, and under the learner's control.
4) The principles of cognitive science and constructivism are applied in the development and utilization of learning materials

5) Learning is centred and organized according to cognitive knowledge so that knowledge is formed when used.
6) Learning materials show high learner interactivity
7) The nature of the material that integrates words and examples from many media sources.

D. Enrichment

Answer the questions below properly and correctly!

1. Explain what is meant by technology in learning media based on the understanding of AECT!
2. Technology development will always be directly proportional to the development of technology as a teaching medium; mention examples of relevant technologies used today as learning media and give reasons!

CHAPTER IV

TYPES OF LEARNING RESOURCES

A. Introduction

This chapter presents the understanding of learning resources and the types of learning resources proposed by experts. In addition, this chapter will also explain learning resources that can be used optimally in the learning process.

B. Learning Objectives

After attending this lecture, students can explain the meaning of learning resources and are also able to explain the types of learning resources.

C. Learning Materials

1. Understanding Learning Resources

Learning resources are all sources in the form of data, people, and certain forms that can be used by students in learning, either separately or in combination, to make it easier for students to achieve learning goals or specific competencies.

There are two types of learning resources, namely:

a. Designed learning resources (learning resources by design), specifically learning resources that are designed or developed as a component of an instructional system to provide targeted and formal learning facilities.

b. Learning resources (learning resources by utilization), namely learning resources that are not explicitly designed for learning purposes and whose existence can be found, applied, and utilized for learning purposes.

Of the two kinds of learning resources, learning resources can be in the form of (1) messages: information, teaching materials; folklore, fairy tales, saga, and so on (2) people: teachers, instructors, students, experts, resource persons, community leaders, institutional leaders, career figures and so on; (3) materials: books, transparencies, films, slides, pictures, graphics designed for learning, reliefs, temples, statues, comics, and so on; (4) tools/equipment: hardware, computers, radio, television, VCD/DVD, cameras, whiteboards, generators, machines, cars, motors, electric tools, screwdrivers and so on; (5) approaches/methods/techniques: discussions, seminars, problem-solving,

simulations, games, workshops, casual conversations, discussions, debates, talk shows and the like; and (6) environment: classrooms, studios, libraries, halls, friends, gardens, markets, shops, museums, offices and so on.

According to the Association of Educational Communication Technology (AECT), learning resources are all sources (whether in the form of data, people, or objects) that can be used to provide learning facilities for students. Learning resources include messages, people, materials, equipment, techniques, and environment/settings. From their origin, learning resources can be divided into two: learning resources by design or learning resources that are intentionally created for learning purposes. Examples are textbooks, modules, audio programs, and transparencies (OHT). The second type of learning resource is learning resources that are already available and just being utilized (learning resources by utilization). These are not explicitly designed for learning purposes but can be found, selected, and utilized for learning purposes. Examples: government officials, expert religious leaders, athletes, zoos, reservoirs, museums, films, rice fields, terminals, newspapers, television broadcasts, and many others.

The Development of Miracles in the World of Education Eric Ashby (1997), an education observer, explains the stages of the development of learning resources. He divided it into four stages as follows:

First, pre-teacher learning resources. At this stage, the primary learning resources are people in the family or group environment; other sources are still very scarce. The objects used are in the form of leaves or tree bark with symbols and verbal cues as the contents of the message. More knowledge is obtained by trial and error so that the results are still simple and absolutely under the control of parents or family members. The hallmark of this stage is its closed and secret nature.

Second, the birth of the teacher is the primary source of learning. At this stage, the forerunner of the school. Changes occur in management, teaching content, the role of people, techniques, and others. The number is still limited, and the teacher's role is dominant. Likewise, the quality of

teaching depends on the quality of teachers. As for the advantages, the teacher is respected and has a high position which determines the success of learning. The weakness is that the number of students who can be educated is still limited, and the teacher's task is cumbersome.

Third, learning resources in printed form. The teacher's task is relatively lighter because of the printed learning resources. Students can learn on their own when they do not understand. The weakness is that sometimes the book's writing is not good, and the contents are difficult for some students to understand. The advantage, the material can be disseminated quickly and widely. Print learning resources include books, magazines, modules, and papers.

Fourth, learning resources for communication technology products. These sources are known as audio-visual aids, namely learning resources from audio (sound), visual (pictures), or a combination of both in a learning process. Another term is also called educational media, which is usually designed to be more directed, specific, and by the development of students. Examples of learning resources at this stage are television, CD, radio, and OHP.

Understanding Learning Resources Edgar Dale (1969), an education expert, suggests that learning resources are "everything that can be used to facilitate one's learning." Another opinion was expressed by the Association Educational Communication and Technology AECT (1977): "various or all sources in the form of data, people and certain forms that students in learning can use. either separately or in combination to make it easier for students to achieve learning goals."

Both of these understandings show that, in essence, learning resources are so broad and complex, more than just learning media. Everything predicted to support and be used for successful learning can be considered a learning resource. With this understanding, the teacher is not the only source but only one of many other learning resources.

a. Types of Learning Resources

The understanding of learning resources described earlier gave birth to several divisions of types of learning resources. There is divided into six types, with the first detail, the source in the form of messages. Second, human, third equipment, fourth, fifth material, technique/method, and sixth environment/setting. Others divide it into two types; firstly, learning resources are designed (by design), namely learning resources that are intentionally created and used in a learning process with a specific purpose. Examples include books, slides, encyclopaedias, and films (VCD).

Second, learning resources in the surrounding environment, namely learning resources that can be utilized/used (by utilization), are in the community and are not explicitly designed—for example, markets, community leaders, museums, government institutions, etc. The various types of learning resources should not be seen partially. It should be seen as a unified whole in a learning process. All types of learning resources are appropriate and need to be considered in order to achieve better learning. Thus, it is expected to have a positive impact on learning outcomes.

Learning resources that can be used

Given the breadth of learning resources, careful planning must be done. Some learning resources that can be considered for use are:

- Library

  So far, the school library is only a compliment. Its existence is essential as a source of learning. Libraries can be used to increase insight and knowledge, increase students' interest and reading habits, and become a means of seeking knowledge/information. The library can also be used as a place for discussion and an arena for exchanging ideas between study groups. Therefore, a library must meet the minimum requirements, including being a well-managed library. Second, the availability of literature (reading

sources) in textbooks, various readings, magazines, encyclopaedic dictionaries, etc.

Third, having an adequate and comfortable space or place so that students feel at home in the library for a long time. Fourth, the ease for students to take advantage of all the facilities in the library to support the learning process. Several schools indicated that their libraries were still in poor condition. In addition to the limited literature, the place used does not seem worthy to be called a library (narrow, separated by tables, and unorganized). Regarding the limited library, it seems to have become a common phenomenon in terms of literature, place, and management. However, as long as educators still have the commitment and desire to improve and think about this problem, God willing, a school library will gradually be realized, although simple but attractive to students.

- Learning Media / Props

The learning media in question are various tools and materials that can be used to assist in the delivery of learning materials. The media are either made by themselves or the work of others. Various existing media must be used optimally and, of course, maintained. Media that has been damaged must be repaired or replaced immediately.

Media that does not yet exist, and if it is valid, it is necessary to think about having it by buying or asking for help. Media that need to be owned, especially electronic media (communication technology products). Usually, by using media like this, learning will be more lively, and students will be more enthusiastic about following it. Various media such as slide films, projectors, and VCDs can be used anytime as a learning resource. However, when electronic media does not yet exist, it is better to use the media by making your own, even though it is simple.

Most importantly, the media will help students understand the subject matter. It is a shame if the teacher only lectures. In addition to being boring, the teacher will also feel tired.

- Wall magazine

This learning resource is worth considering, especially for learning Indonesian/English. Making can disseminate information or knowledge from student work in essays, poems, short stories, etc. In addition, all magazines can motivate students to enjoy reading, to be encouraged to work simultaneously to learn from each other or evaluate one another's works. In its management, it needs guidance and coaching from teachers, especially language teachers. Meanwhile, a making committee can be formed at each class or school level. They are responsible for managing the making properly and sustainably.

What other sources?

In addition to utilizing existing learning resources, teachers must find and plan other learning resources, either the results of their design or sources deployed around the school and community. Learning resources that can be utilized and are in the community, for example:

1) Visit the museum according to the material (money museum, history museum, or animal museum)
2) Study tour visiting geological buildings, correctional institutions, or government institutions
3) Visiting places of worship, markets, and malls (shopping places).
4) Bringing in leaders for discussion (police and doctors discussing drugs, DPR members discussing local government, etc.) There are many other alternative sources of learning. The existence of teachers in planning and organizing learning becomes quite essential and will determine the quality of

learning. This means the extent to which the willingness and effort of the teacher are concerned.

b. Types of Learning Resources

Message (message) is learning information to be conveyed, which can be in the form of ideas, facts, teachings, values , and data. Messages are learning information that will be conveyed, which can be in the form of ideas, facts, teachings, values , and data.

People (people) are humans who act as seekers, stores, processors, and presenters of messages, for example, teachers, lecturers, tutors, librarians, laboratory assistants, instructors, sports coaches, experts, producers, researchers, and many more, including the students.

Materials are software containing learning messages usually presented through specific equipment. Examples include textbooks, modules, transparencies (OHT), audio cassettes, video cassettes, sound slide programs, programmed instructions, CAI (computer-based learning), and films.

Tools are hardware (hardware) used to present messages stored in the material. Examples include OHP, slide projector, tape recorder, video/CD player, computer, film projector, and others.

Techniques are particular procedures or steps that are prepared using materials, tools, environments, and people to convey messages, for example, demonstrations, discussions, practicums, independent learning, open/distance education systems, face-to-face tutorials, and so on.

The setting/environment is the situation around the learning process where students receive learning messages. The environment is divided into two types, namely, the physical environment and the non-physical environment. The physical environment includes school buildings, libraries, laboratories, halls, workshops, and others. At the same time, the non-physical environment includes study room layout, air ventilation, weather, atmosphere, learning environment, and others.

AECT (Association for Educational Communication and Technology) 1979 classifies the types of learning resources into 6. These types of learning resources are commonly referred to as "BOLATP" which is an acronym for the six types of learning resources as follows:

1) Materials, namely software containing messages to be presented through the tool or the device itself. For example, Slides, Movies, Audio, Video, and others.
2) People, namely humans, act as storage, processing, and presenter of messages—for example, teachers, lecturers, instructors, and others.
3) Environment, the surrounding situation where the message is delivered; the environment can be physical (school buildings, libraries, laboratories, and so on) or non-physical environments (learning atmosphere and others).
4) Tools, namely hardware used for delivering messages stored in the material. For example, slide projectors, OHP, Video Tape, Television, and others.
5) Techniques, namely procedures or references prepared for using materials, equipment, people, and the environment to convey messages. For example, demonstrations, lectures, independent study, and others.
6) Messages, namely information transmitted by other components in the form of ideas, facts, understanding, and data. For example, curriculum, syllabus, folklore, inscriptions, and others.

D. Enrichment

1. Please mention and briefly explain the stages of developing learning resources!
2. Explain the classification of learning resources according to AECT (Association for Educational Communication and Technology) 1979!

CHAPTER
V

TYPES OF LEARNING MEDIA

A. Introduction

This chapter presents the types of learning media: electronic learning media, computer-based learning media, printed teaching media, and digital learning media. Some of these types of learning media are learning media that are commonly used in the learning process both at school and in college.

B. Learning Objectives

After attending the lecture, students can explain the learning media types and give examples of what each type of learning media has learned.

C. Learning Materials

1. Electronic Learning Media

a. Television as a Learning Media

Television is a medium that can convey audio-visual learning messages accompanied by elements of motion. Viewed from the point of view of the number of recipients of the message, television is classified as mass media. Educational television uses video programs that are planned to achieve specific learning objectives regardless of who broadcasts them. Educational television is not only entertaining but, more importantly, educational. Therefore, it has its own characteristics, among others; guided by the instructor, systematic, orderly and orderly, and integrated.

As a learning medium, television has advantages and disadvantages, as follows:

The advantages of television media:

1) Television can transmit audio-visual materials, including still images, films, objects, specimens, and dramas.
2) Television can present good models and examples for students.
3) Television can bring the real world into the home and in the classroom, such as people, places, and events, through live broadcasting or recording.
4) Television can allow students to see and hear themselves.
5) Television can present programs that can be understood by students with different levels of education.

6) Television can save the time of teachers and students. For example, by recording broadcasts, the lessons presented can be replayed if needed without having to repeat the process.
7) Television is an attractive, modern tool, and it is always ready to be accepted by children because they know it as part of their life outside school.
8) Television can increase the knowledge and ability of teachers in terms of teaching.

Weaknesses of television media:

1) The nature of communication is only one way.
2) If you use it in class, the broadcast schedule and class schedule at school are often difficult to adjust.
3) Programs beyond the control of the teacher.
4) In television, when the broadcast continues, there is no opportunity to understand the messages according to students' individual abilities.
5) The teacher does not have the opportunity to revise the film before it is broadcast.

b. Computer Based Learning Media

Computers are one form of learning media. The existence of a computer can be a learning aid as well as a learning resource that can help teachers and students distribute and receive learning materials to be more optimal. By enabling the existing devices in the computer network, learning will be more effective and efficient. Because computers can display messages visually, audio, and even audio-visually.

Computers can also be used as a source of learning information. Learning by using a computer is known as using the concept of computer-assisted learning (computer-assisted instruction); in this CAI concept, the computer functions as a presenter of learning material, storing subject matter and providing learning evaluation analysis. Education is one of the essential things in the development of human

resources. And for Indonesia, this is a challenge in improving the quality of the education system. Indonesia is one of the countries trying to reduce digital among its population through ICT in various sectors. In the education sector, there is also an educational telematics program or the use of ICT in education, also known as e-education.

The use of ICT in education is known as e-learning programs. E-learning in Indonesia has been developed under the auspices of the education Telematics or E-education program. It is used in all forms of communication technology to create, manage, and provide information. E-education relates to the use of communication media and communication technology, such as computers, the internet, telephone, television/video, radio, and other audio-visual aids used in education.

Regarding the use of e-learning, it is focused on using computers. This is because the use of computers in education has been widespread and has reached various interests. Among its services are for the benefit of learning, namely to assist teachers in improving the quality of learning. The outline of the computer is used in two kinds of applications, namely in the form of computer-assisted education (Computer Assisted Instruction-CAI) and computer-based learning (Computer Based Instruction-CBI).

c. WEB-Based Learning (E-Learning)

Web-based learning, which is popularly known as Web-Based Education (WBE) or sometimes called e-learning (electronic learning), can be defined as the application of web technology in the world of learning for an educational process. Internet technology, and as long as the learning process is felt by those who follow it, the activity can be referred to as web-based learning. The existence of access to information sources via the internet are requirements that must be required. Furthermore, there is information about the location of the information sources we want to obtain. Several data sources can be accessed freely without complicated administration processes. There are several sources

of information. Which can only be accessed by parties authorized by the owner of the information source.

Internet technology makes it easy for anyone to get any information from anywhere and anytime easily and quickly. Information is available in various data centres on multiple computers in the world. As long as the computers are connected to each other on the internet network, we can access them anywhere. Only as an alternative media for the paper to store various documentation or information.

2. Print Learning Media

Printed learning media is an ancient and popular media among educators. The types of print learning media are as follows:

a. Magazine (magazine)

Publications/periodicals containing: articles, depth reporting, investigative news, stories, advertisements, etc. Quarto/folio magazine size and bound. Types of Magazines:

1) Weekly Magazine.

This type of magazine is published once a week. The news is in-depth news, with the kind of news being news or about an event.

2) Mid-Month Magazine.

This magazine is published twice a month. The news displayed is more informative and usually contains lifestyle news.

3) Monthly Magazine

The monthly magazine is published once a month. The type of news delivered usually includes investigative or news obtained from research results.

4) Bimonthly Magazine

This magazine is published once every two months. The information presented in this magazine is usually related to reports of the results of the activity. For example, a company balance sheet or a magazine that contains a report on the income of a zakat institution.

5) Quarterly Magazine

This magazine has a concept similar to that of a bi-monthly magazine. The only difference is the time of publication, which is done every three months.

b. Journal

Initially, the journal was a personal record containing the experiences that had befallen the author. Journals are usually defined as periodicals issued by certain universities or professional organizations. The contents are in the form of breakthroughs or research produced by academic circles.

c. Newspapers / Newspapers

A newspaper is a periodical or daily publication that contains direct news, articles, and depth reporting. Flipchart size. Types of Newspapers:

1) Daily Newspaper.

This type of print media is published every day, except on certain days, such as national holidays. This type of print media is still further divided into National Daily Newspapers, Regional Daily Newspapers, and Local Daily Newspapers. The news conveyed is the type of news or the latest information and is delivered with a straight news system or what it is.

2) Weekly Newspaper.

This type of print media is more commonly known as tabloids. Usually, the news raised is entertainment news, in-depth news, or in-depth coverage. Writing in this media is more feature or descriptive style.

d. Tabloids

A collection of processed or investigative news containing stories, articles, and advertisements is published regularly. Types of tabloids:

1) Women's Tabloids
2) Children's Tabloid

3) Men's Tabloids
4) Political Tabloids

e. Bulletins

Print media is usually made for certain circles or internal only. And this media usually only consists of a few pages and is made with a simple concept. Newsletters are also not made for commercial purposes.

f. Newsletters

The format is printed in a simple folio/quarto size with the number of pages 1-10. Published regularly, the scope of news is internal.

g. Caricature

Image to launch criticism or "flick." Each newspaper usually has a "character" with a distinctive character.

h. Articles

Freelance writing about various actual things is the author's personal opinion. Writing material comes from references; the contents are the author's views, judgments, and solutions. The author can be from within (the newspaper/magazine reporter) or an outsider.

i. Textbooks / Books

Textbooks are the most popular learning tools and are widely used in other learning tools, especially recently, when the printing press entered the super modern age. Textbooks have specific values, such as assisting teachers in realizing the curriculum, facilitating the continuity of lessons, can be used as a guide, provoking aspirations, can present uniform material, being easy to repeat, and so on.

3. Digital Learning Media

Digital learning media is a contemporary learning media that, in the current era, is very widely used, and it is a demand to apply it due to the times. The types of digital learning media are as follows.

a. Projection Media

Projected media is media that uses a projector so that the image appears on the screen. This means that the use of this media depends on the projector's tools to connect with the message's recipient.

1) Transparency Projector/ Overhead Projector (OHP)

The OHP is a device designed in such a way that it can project transparency onto the screen over the top or side of the person's head.

This OHP has been found since the 1930s, since the invention of the Fresnel lens used in OHP. The first European country to use this OHP was Scandinavia. During the second world war using OHP was very useful for the armed forces. The United States increases the use of OHP in delivering educational information accompanied by technical needs or techniques of use OHP Parts.

2) Projector / LCD

What is a projector? According to experts, the definition of a projector is a device that can integrate light sources, optical systems, electronics, and displays to project images or videos onto a screen/wall and make it look bigger.

In other words, the definition a projector is a tool to help display images, videos, or other data from a computer or laptop to a screen (it can also be on a flat surface such as a wall).

Projectors are very useful for helping someone with presentations and presenting explanations or expressions in the form of text, images, animations, or even videos, to the audience to make them easier to understand. The projector's function is to display objects or data (text, images, videos) on a computer/laptop on a screen or wall. The projector can easily say things in a larger size and has high flexibility.

The types of learning media today are very diverse, influenced by their nature and characteristics. Therefore, the media can be classified in various ways to meet classroom learning needs. The teacher's proper, careful and thorough understanding of the classification and selection of media types is a determining factor in the accuracy of conveying the contents of learning messages from the source of the news to students as recipients of the message. The types of learning media that are commonly used consist of audio, visual, and motion audio-visual media.

Audio media is media whose message delivery can only be received by the sense of hearing(Sadiman and S 2010). The message or information is poured into auditive symbols through words, music, and sound effects(Riyana, Retnasari, and Supriyadi 2019). In other words, this type of media only involves the sense of hearing and manipulating elements of sound or sound. Based on some of these definitions, it can be defined that audio media is media that contains messages in auditive form (can only be heard) that can stimulate students' thoughts, feelings, attention, and willingness to learn the content of the themes presented. Several types of audio media used in learning include audio cassettes, broadcast audio, compact discs (compact discs), MP3 (MPEG Audio Layer 3), WAV (Waveform Audio Format), internet radio, and language laboratories.

Visual media is also called viewing media because someone can appreciate the media through their eyesight. This media is divided into two: visual media that is not projected and still projection media. Visual media that are not launched are simple media, which do not require a projector and screen to project software. Included in this type include: still images or still images; visual media in the form of graphics, sketches, diagrams, posters, charts or charts, flannel boards, and bulletin boards; printed materials in the form of textbooks, modules, and teaching materials or guide books; and practical and applicable media, which cover

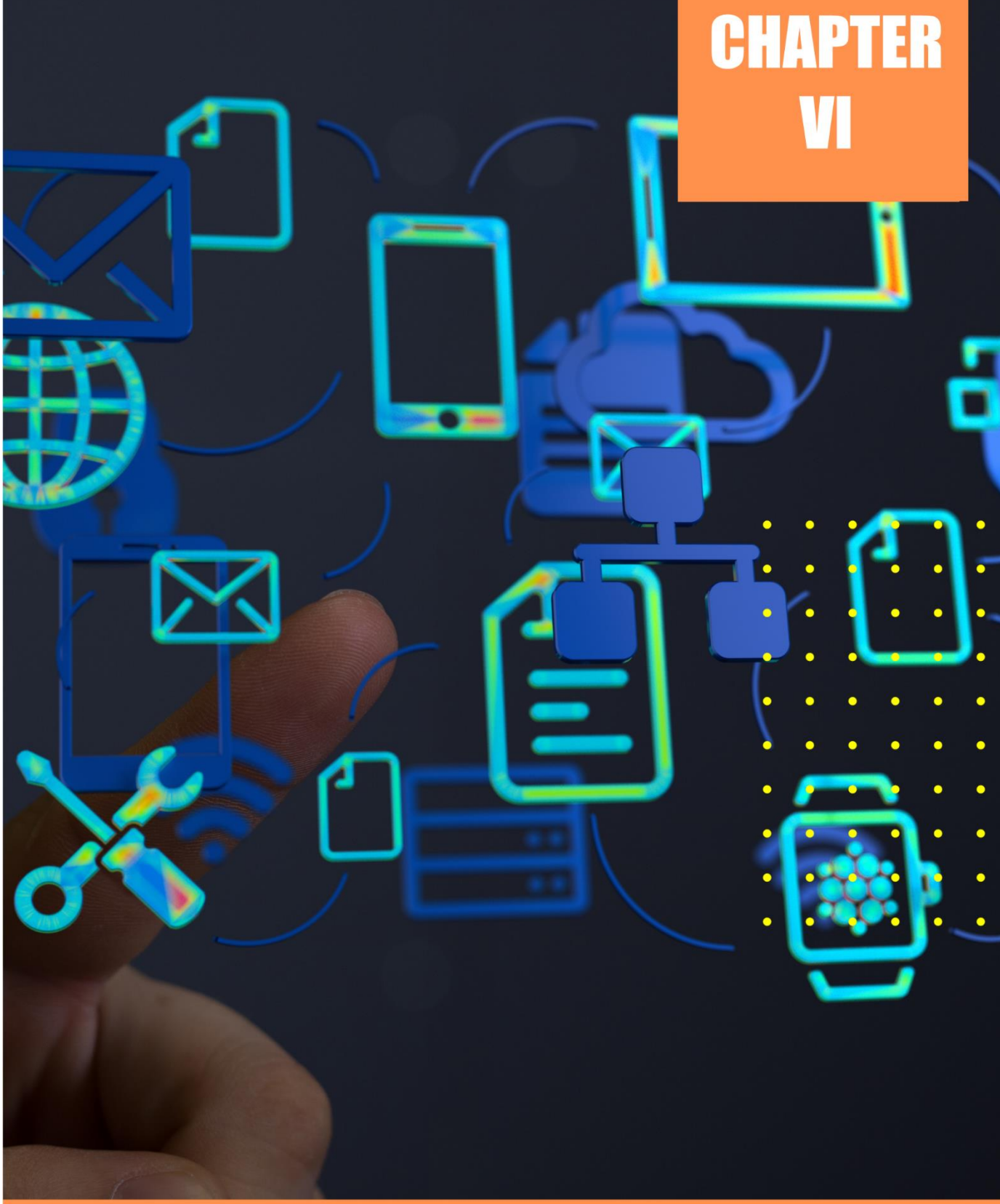
the three media in the form of flip charts, flashcards, flannelgraphs, and bulletin boards.

A projected still medium is a visual medium that projects messages through a device capable of projecting various messages through writing, images, numbers, or even graphics. This media has similarities with visual media in presenting visual stimuli; graphic materials are widely used in stationary projection media. The difference between the two is that the target graphic media can directly interact with the message conveyed through the media. In contrast, on silent projection media, the notification must be projected first with a projector so that it can be seen by the target. Sometimes this type of media is accompanied by audio recordings, but some are only visual. The types of silent projection media include frame films (slides), filmstrips, transparency media (overhead transparency (OHT) and overhead projectors (OHP), opaque projectors, and microfiches.

The third type of media is audio-visual motion media. Motion audio-visual media is media whose message delivery can be received by the sense of hearing and the importance of sight, and the resulting image is a moving image. The use of motion audio-visual media can make teaching delivery more meaningful and memorable. The combination of solid multimedia elements between audio, visual, movement, color, and three-dimensional impressions makes audio-visual motion media have its own charm so that it is expected to improve students' thinking skills, beliefs, learning attractiveness, arouse students' motivation in learning and clarify the material presented so that it is hoped that the learning objectives can be achieved. This includes motion audio-visual media, including film, television, video (VCD, DVD, VTR), computers, and the like.

D. Enrichment

1. Mention some advantages and disadvantages of using television as a learning medium!
2. Explain what is meant by Computer Assisted Instruction!



CHAPTER VI

SELECTION OF MEDIA AND LEARNING RESOURCES

A. Introduction

This chapter presents the selection of media and learning resources. The discussion includes the functions and benefits of learning media, selection of teaching media, understanding of learning resources, criteria for selecting learning resources, and steps for choosing learning resources. Students are equipped with this ability to optimize the role of learning media and learning resources in the learning process.

B. Learning Objectives

After attending this lecture, students can explain the functions and benefits of learning media, selection of good learning media, understanding of learning resources, criteria for selecting learning resources, and steps for choosing learning resources that are suitable for learning.

C. Material

The continuous development of technology in the world of work not only requires that university graduates (PT) have broad knowledge and professional skills that are ready to be used in the field of work. In fact, this has the consequence that universities need to continuously improve the quality of graduates to have the desired competencies. The achievement of competence can be obtained through an effective learning process. Learning is a process of changing behavior resulting from interacting with the environment so that the learning experience and outcomes become more meaningful (meaningful learning). The learner's success is marked by acquiring knowledge, skills, and positive attitudes in individuals according to the expected goals. This success is highly likely. The success of this learner is strongly influenced by many factors, including the use of media that functions as an intermediary for learning messages.

Media serves to direct students to obtain a learning experience (Learning Experience) determined by students' interaction with the media. In accordance with the objectives, the suitable media can enhance learning outcomes. This argument is in line with the opinion of Edgare Dale regarding the theory of "cone experience," which is the primary basis for using media in the learning process. The quality of interaction in the learning process is also influenced by the five senses that humans

have, especially the sense of hearing (ears) and the sense of seeing (eyes); these two senses will be connected to the reception center in the human brain.

Media (plural of the word medium) is a word that comes from the Latin Medius, which means "middle," "intermediary," or "introductory" (Arsyad 2007; Sadiman and S 2010) as an intermediary or messenger from the sender to the recipient of the message. Media can be in the form of a material (software) and/or a tool (hardware). Often the terms tools or communication media are used interchangeably or as a substitute for the term educational media.

Hamalik (1994) stated that with the use of tools in the form of communication media, communication relationships will be able to run smoothly and with maximum results. Reiser and Gagne also argue that media boundaries are like this (in Criticos, 1996; Gagne et al., 1988), which implicitly states that the media are all physical tools used to convey the content of teaching materials. In this sense, books/modules, tape recorders, cassettes, video recorders, video cameras, television, radio, films, slides, photos, pictures, and computers are learning media.

Based on the limitations of the media as mentioned above, it can be said that learning media is everything related to software and hardware that can be used to convey the content of teaching materials from learning resources to students (individuals or groups), which can stimulate the mind, feelings, attention, and interest in learning in such a way that the learning process (inside/outside the classroom) becomes more effective.

1. **Understanding Learning Media**

   According to the Association of Education and Communication Technology / AECT (Sadiman and S 2010) etymologically, the word "media" is the plural form of "medium," which comes from the Latin "medius," which means 'middle.' In Indonesian, the word "medium" can be interpreted as 'between' or 'medium' so that the notion of media can lead to something that delivers or directs information (messages) between the source (messenger) and the recipient of the message. Media can be defined as a form and channel that can be used in the process of presenting

the information. According to Rohani (2006:2) the media are all forms of intermediaries used by people who spread ideas so that the concept or idea reaches the recipient. In line with that, Blake and Horalsen (in Rohani, 2002:2) also expressed their opinion about the media. Media is media that is used to carry/convey a message. This medium is a path or tool with a message running between the communicator and the communicant.

According to Ely and Gerlach (in Rohani, 1997:2), the notion of media has two parts: the narrow meaning and the broad meaning. In a little sense, media is in the form of graphics, photos, and mechanical and electronic devices used to capture, process, and convey information. In a broad sense, activities can create conditions, thus enabling students to acquire new knowledge, skills, and attitudes. From the explanation of the definition of media put forward by these experts, it can be concluded that the media are all forms of intermediaries used by the sender of messages, ideas, or ideas so that the message, idea, or idea reaches the recipient of the message clearly and thoroughly. Furthermore, the term learning is closely related to learning and teaching. Teaching and learning occur together. Learning can occur without a teacher or other formal education and learning activities, while instruction includes everything the teacher does in the classroom. There are many opinions about the meaning of learning and learning. The difference is partly due to differences in theory and the assumptions that underlie the approach. Budiningsih (2005:20-107) describes six ideas about learning and learning, namely the theory of behaviouristic, constructive, constructivist, humanistic, cybernetic, and revolutionary-sociocultural.

According to the behaviouristic theory, learning is a behaviour change resulting from the interaction between stimulus and response. According to this view, the purpose of learning is emphasized on the addition of knowledge, while learning as an activity "mimetic," which requires students to re-express the ability that has been known in the form of reports, quizzes, or tests (Budiningsih, 2005:20-38). According to

cognitive theory, learning does not only involve the relationship between stimulus and response. Still, a change in perception and understanding cannot always be seen as visible behaviour. This theory also argues that parts of a situation are interconnected with the entire context of the problem. This theory argues that learning is an internal process that includes memory, retention, information processing, emotion, and other psychological aspects. This theory attaches great importance to students' freedom and active involvement in learning activities so that learning is more meaningful for students. To attract interest and increase student retention of teaching materials, it is necessary to link new knowledge with the cognitive structure that students already have (Budiningsih, 2005: 34-51). The constructivist theory states that learning is an effort to give students their experience through assimilation and accommodation, leading to the formation of their cognitive structure. Thus, learning is endeavoured to create conditions for optimally forming cognitive structures in students (Budiningsih, 2005: 64).

According to the view of the humanistic theory, the learning process must be initiated and aimed at the interests of humanizing humans themselves. For this reason, any learning theory can be utilized as long as it can optimally achieve the goals of self-actualization, self-understanding, and student self-realization. All components of education, including educational purposes, are directed at the formation of ideal human beings, namely humans who can achieve self-actualization, so the emotional experience and unique characteristics of students in learning need to be paid attention to the teacher (Budiningsih, 2005: 68-76) According to cybernetic theory, learning is processing information. Although similar to cognitive theory, this theory is very concerned with information systems that will determine the process. Another assumption of this theory is that no single approach is ideal for all situations and students. According to this theory, the process of processing information in memory occurs sequentially, starting from encoding information (encoding), and storing

information (storage), to revealing information that has been stored (retrieval) (Budiningsih, 2005: 81-93).

The theory of socio-cultural revolution sociocultural-revolution) States that an increase in a person's mental functions mainly comes from social life or the group. The concept of genetic laws regarding development, zones of proximal development, and mediation—as proposed by Vygotsky—proves that a person's way of thinking must be explained by his socio-cultural and historical background (Budiningsih, 2005: 107). Degeng (in Wena, 2009:2) states that learning is an effort to teach students. In http://carapedia.com/pengertian_definisi_pembelajaran_menurut_para_ahli_info507.html, the definitions and definitions of learning according to several experts are presented. According to Knowles, learning is a way of organizing students to achieve educational goals. According to Slavin, learning is a change in individual behavior caused by experience.

According to Woolfolk, learning occurs when an experience produces permanent changes in knowledge and behavior. Crow defines learning as the acquisition of character, knowledge, and attitudes. Rahil Mahyuddin states that learning is a behavior change involving cognitive skills, namely the mastery of knowledge and the development of intellectual skills. Achjar Chalil revealed that learning is a process of student interaction with educators and learning resources in a learning environment. Corey said that learning is a process by which a person's background is deliberately managed to enable him to participate in certain behaviours under particular conditions. Kimble defines learning as a relatively permanent change in behaviour due to reinforced practice. Munif Chatib stated that learning is a two-way knowledge transfer process between teachers as information providers and students as recipients of the information. Sudrajat noted that learning is a teacher's effort to change student behaviour so that they want to learn.

Based on these definitions, it can be concluded that learning is essentially a systematic effort to make students learn. Judging from the social interactions, learning can occur individually, in small groups, and in large groups. Suppose it is associated with the media or its supporting facilities. In that case, learning can be done independently, with the help of learners and media, or with various kinds of media, commonly called multimedia learning. From this explanation, it can be seen the characteristics of learning, namely the existence of objectives, materials that are by the goals, methods and learning media, assessment, fertile situations, and teachers who carry out learning and, the presence of students who carry out learning. The form of interaction between students and learning resources can vary.

Learning will only be effective if students are given many opportunities to do something through multi-methods and multimedia. Through various methods and learning media, students can interact actively and take advantage of all their potential. Many experts provide limitations on teaching media. AECT, for example, says that learning media are anything people use to convey messages. Gagne defines learning media as a component in the student's environment that can stimulate them to learn. In line with that, Briggs defines media as a tool to provide incentives for students so that the learning process occurs. Heinich, et al. (1993) argue that "learning technology or media is the scientific application of the learning process in humans in practical teaching and learning tasks." Ali (1992) argues that "media are various components in the student's environment that can provide stimuli for learning." Miarso (2004) argues that "learning media are everything that is used to channel messages and can stimulate the thoughts, feelings, attention, and willingness of learners so that it can encourage the learning process."

a. The Purpose of Using Learning Media

Sumantri (1999:178) states that the objectives of learning media include the following. First, it makes it easy for students to understand certain concepts, principles, attitudes, and skills. Through learning media, teachers can concretize and provide examples of abstract ideas, directions, and perspectives and show concrete steps and examples of skills that will be formed in students. Second, provide different and varied learning experiences to stimulate students' interest in learning. Through learning media, teachers not only explain understanding verbally but can also perform or be accompanied by images, video, text, and sound. In addition, the media can also be used by students in independent learning, both at and outside school. Third, cultivate certain attitudes and skills in technology. Media can present concrete forms or examples of attitudes or skills to be instilled in students. In addition, students are interested in using or operating media so that they will indirectly have a positive attitude towards development and be skilled in using technology. Fourth, create a learning situation that students cannot easily forget. Because the media provides a learning experience that activates several senses simultaneously or successively, the learning outcomes can last longer than just using one or several reasons. Moreover, in interactive multimedia, students have the opportunity to operate on their own and learn on their own from the media they work. This will also increase students' resistance to the material they have learned.

b. Functions and benefits of Learning Media

The effectiveness of the teaching and learning process (learning) is strongly influenced by the factors of the method and learning media used. The two are interrelated, where selecting a particular plan will affect the type of media used; in other words,

there must be a match between the two to realize the learning objectives. Although other things also need to be considered in the selection of media, such as: learning context, learning characteristics, tasks or expected responses from learning, learning outcomes, the content of teaching materials, sequences, and learning strategies are criteria for media selection and production.

Currently, the media has influenced all aspects of life in the information age, although to different degrees. Furthermore, Sadiman, et al. (1990) conveyed the function of media (educational media) in general as follows:

1) Clarify the presentation of the message so that it is not too visual;
2) Overcome limitations of space, time, and senses; for example, objects too large to be brought to class can be replaced with pictures, slides, and so on. Events that happened in the past can be reproduced through films, videos, photos, or film frames;
3) Increasing enthusiasm for learning, enabling students to learn on their own based on their interests and abilities, and overcoming students' passive attitudes; and
4) Providing the same stimulus can equate students' experiences and perceptions of the lesson's content. Sudjana and Rivai (Sudjana and Rivai 1992) reveal several benefits of media in the student learning process, namely:
    a) it can foster students' learning motivation because teaching will attract their attention;
    b) the meaning of teaching materials will become clearer so that students can understand and enable mastery and achievement of teaching objectives;
    c) teaching methods will be more varied, not solely based on verbal communication through words; and

d) students do more activities during learning activities, not only listening but also observing, demonstrating, doing direct, and acting.

Based on some of the functions of learning media stated above, it can be concluded that the use of media in teaching and learning activities greatly influences the senses. Regarding understanding learning content, it can be stated logically that using media will guarantee a better experience for students. Learners who learn through listening alone will have different levels of experience, and the length of "memory" lasts compared to students who discover by seeing or simultaneously hearing and seeing. Learning media can also arouse and bring students into an atmosphere of pleasure and joy, where there is emotional and mental involvement.

c. Selection of learning media

In the selection, several considerations or criteria can be used to fulfill the needs and achieve learning objectives. General measures that need to be considered include;

1) Learning objectives,
2) conformity to the material,
3) student characteristics,
4) student learning styles (auditive, visual, and kinesthetics),
5) environment, and
6) availability of supporting facilities.

Meanwhile, specific criteria that need to be considered in selecting media were put forward by Erickson (1993), namely:

1) whether the material is essential for students,
2) whether it can attract students' interest in learning,
3) whether there is a direct relationship with learning objectives.
4) how is the presentation format arranged?
5) how about the material, current and authentic?

6) is the concept and accuracy clearly guaranteed,
7) does the content and percentage meet the standards, and
8) is the presentation objective?
9) does the material meet technical quality standards?
10) has the material been tested or validated?

Amount Other particular criteria in choosing the suitable learning media can be formulated in one-word ACTION, namely the acronym for Access, Cost, Technology, Interactivity, Organization, and Novelty. These criteria can be explained as follows;

1) Access

Ease of access is the first consideration in choosing media. Is the required media available, accessible, and can students use? For example, if we want to use the internet media, is the telephone network? Access also concerns policy aspects; for example, are students allowed to use computers connected to the internet? School principals are permitted to use the internet, teachers/employees, and students.

2) Cost

Cost should also be taken into consideration. Many types of media can be our choice. Sophisticated learning media are usually expensive. However, we have to calculate the cost with the benefit aspect. Because more and more people use it, the unit cost of media will decrease.

3) Technology

We may be attracted to one particular medium. , But we need to pay attention to whether the technician is available and easy to use? Say we want to use audio-visual media for class, we need to consider whether there is electricity, is the voltage sufficient and appropriate, and how to operate it?

4) **Interactive**

A suitable medium can lead to two-way or interactive communication.

5) **Organization**

Another essential consideration is organizational support; how is it organized? Is the school leadership supportive? Are the necessary facilities available?

6) **Novelty**

The novelty of the media to be selected must also be considered. Because newer media are usually more attractive to students. In fact, the learning process does not only use one type of media. The combination of various kinds of learning media and also a variety of types of learning media will provide more exciting learning conditions and situations, not dull, and students can gain more learning experiences. The teacher's task in preparing the learning process is to select and create learning media by predetermined objectives. The decision to choose learning media that is systematic and careful is critical to solve the problem of successful and cost-effective learning. This statement shows how vital the stages of selecting and developing learning media are so that the learning process can run well. Several essential things need to be considered in establishing and developing learning media. The method of selecting existing or developing new media is based on context, expectations, performance conditions, available resources, culture, and practicality. The selection of the type of learning media is made for several reasons:

a) Learning media is selected to improve the quality of learning;

b) Learning media are selected to present and strengthen the most essential knowledge and skills. Media is usually

used to submit content. Media also serves as a tool to reinforce crucial points so that learning outcomes can improve;

c) Variations in the use of various types of learning media will reinforce information and offer additional opportunities to strengthen learning without making students repeat the learning material;

d) Learning media is chosen to accommodate the different characteristics of students, mainly because of the various learning styles that students have. Learning style refers to a group of psychological traits that determine how a person feels and interacts in a learning environment.

Ronald H. Anderson (1987) describes the logical steps that must be taken in the process of selecting and making learning media. These steps are presented with questions that must be answered so that they will eventually lead to groups of types of learning media. The questions in each step of the selection of teaching media are questions that connect the content and objectives of understanding with several characteristics of the types of learning media. The media selection steps are presented in a flow chart so the media selection process can be carried out systematically.

2. Understanding Learning Resources

Based on the explanation by the Association for Education and Communication Technology (AECT). Learning resources are everything that supports the learning process, including service systems, learning materials, and the environment. Learning resources are not only limited to materials and tools but also include labor, costs, and facilities. Learning resources can be used in learning activities, either separately or in combination, making it easier for students to achieve learning goals or competencies. Learning resources as an instructional component consist of

components of people (resources), message content, materials, tools, techniques, and setting/environment.

a. Criteria for Selection of Learning Resources

There are several factors to consider in selecting, developing, and using learning resources. The basis for selecting learning resources is straightforward; that is, it can meet the needs or achieve the desired goals or not. Learning resources that can be used in the learning process are very diverse; no longer is the teacher as the only learning resource in the classroom or textbooks as well as student worksheets which are a source of student learning, but many learning resources can be used by both teachers and students in the teaching and learning process. So that in education, students will be more able to become good learners, not good listeners. With various learning resources that can be used by students and teachers, it is hoped that learning will be more meaningful for students.

Several things must be considered in the use of learning resources as follows:

1) Economical, namely the costs available for media procurement, whether you have to buy or make your own, simple or complex, long term or short term.
2) It is practical and straightforward in the sense that it is easy to reach, easy to implement, and easy to obtain.
3) Flexible (can be developed and modified in order to achieve learning objectives.
4) Relevant to teaching objectives and other teaching components.
5) Can help the efficiency and effectiveness of achieving teaching goals.
6) Have positive values for both teachers and students in the teaching process.

7) By teaching and learning strategies and interactions that have been designed and then developed.,

The selection and use of learning resources must be based on the following:

1) Analysis of student characteristics.

   The learning resources used are by the student's abilities or not, whether the learning resources are used individually or in groups, taking into account the background of the students and the level of students' abilities, etc.

2) There is a purpose and instructional content.

   Learning resources should be selected to support the achievement of predetermined instructional goals.

3) There is a learning organization strategy.

   Choose learning resources through consideration of organizational or institutional support.

4) There is a delivery strategy.

   The selection of learning resources is appropriate, easy to understand, and by the learning objectives; the learning methods must also be on target.

5) There is a learning management strategy.
   - In the classroom / in the neighbourhood (place)
   - Managed maximally between using learning resources within a predetermined time to be effective and efficient.

6) There is the development of learning outcomes measurement procedures.

Measurement of learning outcomes can be done through tests and processes; from these tests and procedures, it can be seen whether there is an increase in value after utilizing learning resources. The selection of learning resources refers to the formulation of the developed syllabus. Learning resources include reference sources, environment, media, resource persons, tools, and

materials. Learning resources are written more operationally and can be directly stated in what teaching materials are used. For example, the learning resources in the syllabus are written reference books, and the lesson plans must include the actual teaching materials.

If using a book, the title of the textbook, the author, and the page referred to must be written. Using ICT-based teaching materials, the file name, storage folder, part or file link, or the website address must be registered as a learning reference.

b. Steps to Choose Learning Resources

In selecting effective and efficient learning resources, the content and objectives of learning must be by the characteristics of specific learning resources. To choose several types or components of learning resources as proposed by AECT, it can also be used as a comprehensive selection step, namely:

1) Formulate goals to be achieved by using learning resources clearly.
2) Determine the content of the message used to achieve the goal.
3) Look for learning materials (materials) that contain the content of the message.
4) Determine whether it is necessary to use people's learning resources, such as teachers, experts in the field of science, community leaders, and so on.
5) Determine whether it is necessary to use equipment to transmit message content.
6) Choose the appropriate equipment for the transmission of message content.
7) Determine the message presentation technique. For example, the learning techniques are lectures, assignments, and questions and answers.

8) Determine the setting of the environment in which the activity of using learning resources takes place.
9) Using all learning resources that have been selected or determined effectively and efficiently. For example, the learning process is carried out with an agreed schedule, namely six meetings for the learning process, according to the number of themes, plus one session for the pre-test.
10) Conducting an assessment of learning resources. In this example: learning resources before being applied to the actual learning subject, a trial was conducted on issues that were not the learning targets.

c. Optimizing Learning Resources

The availability of several types and learning resources requires teachers to organize learning resources well. For this reason, it is necessary to optimize learning resources to be efficient and effective. Optimizing learning resources through the following activities:

1) Increase teacher creativity in creating and utilizing simple, inexpensive, and valuable learning resources.
2) Utilize used goods by modifying them according to learning needs.
3) Use the environment as a learning resource wisely. Utilization of the environment does not have to go to faraway places; even the school environment can be used as a learning resource.
4) Develop ICT media appropriately and according to educational needs.

D. ENRICHMENT

1. Explain several consideration or criteria that can be used to fullfil the needs and the achieve learning objectives!
2. Mention the comprehensive selection steps in choosing learning resources!

CHAPTER VII

RELIGIOSITY IN LEARNING MEDIA

A. Introduction

This chapter presents a discussion of religiosity in learning media. The explanation consists of the meaning and concept of religious moderation, the values of religious moderation, the dimension of religious moderation, the measurement of religious moderation, the Internalization and Implementation of Religious Moderation in learning media, the definition of religiosity, the dimension of religiosity, and the bulk of religiosity.

B. Learning Objectives

Students can explain the concept of religious moderation, the values of religious moderation, the dimensions of religious moderation, explain how to measure religious moderation, explain how to internalize and implement religious moderation in learning media, explain the definition of religiosity, explain the dimension of religiosity, and explain how to measure religiosity. The values of moderation instilled in the discussion of this chapter are tolerance, deliberation, and non-violence.

C. Material

1. The Meaning and Concept of Religious Moderation

Religious moderation comes from two words, namely moderation and religion. Moderation comes from the word moderate, which means avoiding extreme behaviour or tendencies towards a middle dimension or path. In Arabic (Al-Qur'an), the term moderation uses the term wasathiyah. So al-wasthiyah means a commendable character or trait that keeps a person from extreme tendencies (Zamimah, 2008). According to Quraish Shihab (2004), al-Wasath told everything suitable, which was in a position between the two extremes. For example, bravery is halfway between carelessness and fear. Generosity is an intermediate trait between extravagance and miserliness. So the person mediating between people in conflict or competition is called a referee who is always in a middle position to remain fair to both parties fighting or competing.

The definition of al-wasathiyah terminology (moderate) is a method of thinking, interacting, and behaving based on the attitude of balance/balanced

in addressing two behaviours that allow for analysis and comparison by the conditions and do not conflict with values. Religious teachings and community traditions (Hanafi, 2009). So with this understanding, the wasathiyah attitude will protect a person from excessive tendencies that tend to be one-sided or extreme right or extreme left. The terminological version of moderation (al-wasthiyah), as stated by Yusuf Qardhawi in the book Khasais al-Ammah li Al-Islam, says that moderation with the same expression, namely al-tawasuth or al-tawazun, is an effort to maintain a balance between the two sides/ends/ opposite or contradictory edges so that one does not dominate and emphasizes the other (Qardhawi, 1983). Based on the two definitions above, it can be concluded that moderation is the attitude of someone who does not take sides with the extreme right and extreme left. This attitude is in the middle and does not favour one another. As stated in an expression, khairul age ausathuha (the best affairs are middle ones).

Then what is called religion? According to the KBBI, religion is a system that regulates the system of faith (belief) and worship of the Almighty God, as well as the rules relating to the association of humans and humans and their environment. Moreover, Jhon R. Benet in E. S. Anshori concluded that religion and the deen are generally a credo system (a system of faith) or (a belief system) for the existence of something absolute outside of humans (Anshari, 2004).

As stated above, the word religion begins with the affix to become religious, which is an attitude that exists within a person's individual and encourages him to behave according to the level of holy obedience. This spiritual attitude is also supported by one's understanding of his religion. Furthermore, a person's view or belief in the religion he adheres to will give rise to a religious typology, as stated by Komarudin Hidayat, namely a religious typology that is exclusive, inclusive, pluralist, elective, and universal topology. Each of these types has its own characteristics. Of the five types of religion, in the context of religious moderation, what is expected is an inclusive type of religion. Someone who has an inclusive attitude will be of

the view that apart from the religion he embraces, there is also true, even though it is not as complete or perfect as the religion he adheres to. Therefore, this attitude will contain certain qualities of nobility and nobility.

The middle position makes humans impartial to the left and right and can be seen by anyone in different directions; this leads humans to act pretty and be an example for all parties (Shihab M. Q., 2000). Based on the continuation of the verse, they are made that way so that they become witnesses and, at the same time, become examples for others. At the same time, they make the Prophet Muhammad an example and witness justification for all his activities. The existence of Muslims in a middle position causes them to be not like Muslims who are not trapped in materialism and keep it away from spiritualism (spiritual nature) and vice versa. The middle position will make humans able to combine physical and spiritual, material and spiritual, in all forms of attitude and daily behaviour.

Based on this, knowing his middle position, he will know and be aware of his position as a human being, where he has double duty, namely as khalifatullah (God's representative) to prosper the earth and at the same time as 'Abdullah (servant of Allah) who always Furthermore, according to Quraish Shibah when explaining the verse above, that the wasathiyah attitude (moderation or middle position) invites Muslims to interact, have dialogue and be open with all parties (religion, culture, and civilization) because they cannot be witnesses or do justice if they shut themselves off from the global environment and developments.

The beginning of the emergence of the idea of religious moderation is the emergence of intolerant behaviours in religion. Where some people in the name of religion commit violence against certain religions and groups. The concept of religious moderation in Islam is more highlighted by an attitude of religious tolerance. What is meant by religious tolerance? Religious tolerance is an attitude of mutual respect and appreciation between religious communities. That every religious community has the freedom to carry out the teachings of their religion according to their beliefs and in accordance with the

teachings of their religion. However, religious tolerance does not mean mixing religious teachings. Because mixing religious teachings no longer means tolerance but is blasphemy against religion.

Religious moderation also does not mean giving rise to indifference to the surrounding environmental conditions, nor does it mean creating apathy, negating the prohibition of ma'ruf and nahyi Munkar for the emergence of various immoral behaviors are shown, either directly or through the media. Because in Islam, Amar ma'ruf (ordering or inviting goodness) is not enough but must be balanced with nahyi Munkar. (forbid to use) either shown or secretly.

2. Values of Religious Moderation

Value in English is called value. Value literally means price. Antony Giddens (1995) defines value as an idea that a person or group has about what is appropriate, what is action, and what is good and bad. Meanwhile, according to Danandjaja (2002), value is the understanding that a person has of something more important or less important, what is better and less good, and also what is better and what is wrong. So, value is a concept that shows everything considered valuable in human life, namely something that is considered true, good, worthy, appropriate, or essential by humans.

While the same meaning is also found in Mu'jam al-Was (1972), namely 'adulan and khiyāran which means simple and selected. Moderation in this case can be interpreted as being in the middle, fair, standard, and elected. Moderation in the Big Indonesian Dictionary V edition is defined as reducing violence; avoiding extremes. Thus, a moderate person can be defined as someone who reduces and avoids harsh and extreme attitudes and behaviours. The person always behaves and behaves in a reasonable, fair, standard, and mediocre manner. So, moderation is a commendable state of a person who keeps him from being moderate and avoiding two extreme attitudes; ifrāt attitude (excessive) and muqaṣṣir attitude (reduce).

Thus, religious moderation can be interpreted as a person's attitude and awareness to accept the diversity and religious freedom of a person or

group through mutual respect and respect and allowing for their religious beliefs. Afrizal Nur and Mukhlis (2015), in their research mention some of the characteristics of a moderate Muslim as follows: (1) taking the middle path; (2) continuous; (3) straight and firm; (4) tolerance; (5) egalitarian; (6) consultation; (7) peace/reform; (8) prioritizing the priority; (9) dynamic and innovative; and (10) civilized. On the other hand, someone who does not have some of these characteristics or even has the opposite attitude and behaviour can be said to be an immoderate person. Based on the understanding and explanation above, it can be concluded that the values of religious moderation include: mutual respect and respect, compassion, cooperation and mutual assistance, fairness, peace, tolerance, living in harmony, and caring and sympathetic to others.

3. Dimensions of Religious Moderation

The dimensions of religious moderation put forward by the Ministry of Religion are four things, namely national commitment, tolerance, non-violence, and accommodating to local culture (Ministry of Religion, 2019). However, the dimension of religious tolerance is used as a separate variable so that it is excluded from the concept and variable of religious moderation in this study.

a. National commitment is a significant indicator to see the extent to which a person's perspective, attitude, and religious practice have an impact on loyalty to the basic national consensus, especially related to the acceptance of Pancasila as the state ideology, his attitude towards ideological challenges that are contrary to Pancasila, and nationalism. Part of the national commitment is acceptance of the principles of the nation as contained in the 1945 Constitution and the regulations under it.
b. Rejection of violence is the attitude and behaviour of rejecting all forms of violence in the name of religion. The term radicalism or violence in the context of religious moderation can be understood as an ideology (idea or idea) and an understanding that wants to make

changes to the social and political system by using violent/extreme means in the name of religion, both verbal, physical and mental violence. The essence of acts of radicalism is the attitudes and actions of a particular person or group that uses violent means to bring about the desired change.

c. Religious practices and behaviour that are accommodative to local culture can be used to see the extent to which the willingness to accept spiritual practices that accommodate local culture and traditions is due because religion does not exist in empty space but tends to be contextual with space and time. Moderate people tend to be more friendly in accepting local traditions and culture in their religious behaviour, as long as they do not conflict with the central teachings of the religion.

4. Definition of Religiosity

Religiosity is a concept that describes a complex and multidimensional phenomenon. Due to the complexity of the concept of religiosity, various conceptions, definitions, and measurements have evolved. It all depends on the perspective used and the field of discipline used. Glock and Stark (1965), in the field of sociology of religion, define religiosity as the totality of the functions of the individual soul which includes beliefs, feelings, and behaviours that are realized consciously and thoughtfully in the form of five dimensions, namely ideology, intellectual, ritual, experience, and social. Consequential dimension. Suppose doctrine refers to religious beliefs that underlie attitudes and behaviour. In that case, the philosophical size relates to the expectation that someone has information and understands the basics of spiritual teachings so that the two measurements are described.

The ritualistic dimension is the behaviour, and religious rituals carried out by a person. Meanwhile, the experience dimension relates to personal experience, which may be in a transcendental form and subsequently in the form of a consequence dimension from various other sizes. Hassan and several scholars use the definition and dimensions of Glock and Stark religiosity to be

applied in studying the religiosity of Muslim communities in multiple countries. Likewise, El-Menouar (2014) uses the concept of Glock and Stark and develops it in the form of unique ideas and measurements for the Muslim community, which he calls Muslim religiosity. He created five dimensions of Muslim religiosity but differed from Glock and Stark: fundamental religiosity, primary obligations, religious experience, religious knowledge, and orthopraxis.

According to Joseph Diduca (2007), religiosity is the level of individual conception of religion and the level of commitment to religion in admiring, obeying, and implementing religious teachings as a manifestation of that commitment. Huber dan Huber departs from Glock and Stark but also criticizes and formulates his own measurement of religiosity. Huber and Huber (2012) argue that, in general, religiosity refers to the intensity, meaning, significance, and centrality of religion for individuals. A person's religiosity can be measured by the power of carrying out obligations and religious values that are most prominent in a person.

Religiosity is sometimes related to the formation of the identity of its members and then influential in social and political life. Therefore, religious identity can be conceptualized as a function of the centrality of the content of the construction of one's personal religiosity system. Religious beliefs are more central in identity formation, the more influential on a person's identity and life. In Muslim society in Indonesia, the essence of religiosity and piety, both personal and social, becomes very important in various aspects of life, including social interaction. That is, religious affiliation and religiosity or obedience and piety are central in life.

5. Dimensions of Religiosity

While Glock and Stark compile the five dimensions as mentioned above, other experts such as Fukuyama divide the four dimensions of cognitive, cultic, creedal, and devotional. Other well-known scholars, such as Allport and Ross, identified two main dimensions of religiosity: intrinsic and extrinsic. Huber & Huber (2012) to divide religiosity into five dimensions:

intellectual, ideology, public practice, personal practice, and religious experience.

a. The intellectual dimension is a dimension that refers to social expectations that a religious person tends to have adequate spiritual knowledge so that the person concerned thinks, interprets, and can explain their views on various topics about their religion. A standard indicator of the intellectual dimension is the frequency of thinking about religious matters. Measurement can be made by showing how often spiritual knowledge is acquired through thought processes, leading to the intellectual dimension's heart. In addition, this indicator is not limited to acknowledgment or affiliation of a particular religion but applies to all faiths so that this dimension can be used cross-religiously.

b. The ideological dimension is a dimension that refers to social expectations that religious individuals have beliefs about the existence and essence of God's reality and the human relationship with God. This dimension is represented as a solid and unquestioned belief system in the system of personal religious construction. The general indicators of this dimension should focus only on the logical aspects of the existence of that transcendent reality and the power attached to it.

c. The dimension of public practice is a dimension that refers to social expectations that religious individuals become members of religious communities which are manifested in public participation in religious rituals and communal activities. In the system of personal religious construction, this dimension is represented as patterns of behaviour and an expression of a sense of togetherness in the community of fellow believers of the same religion. The general indicator of this dimension is the frequency with which a person participates in religious services.

d. The dimension of personal practice is a dimension that refers to social expectations that religious individuals devote themselves to individual religious activities and rituals. In the system of private religious construction, this dimension is represented as a pattern of actions and styles of personal devotion to get closer to God. Dimensions include various activities and rituals more personal in human relationships with God, such as prayer and meditation. A standard indicator to measure this dimension is the general intensity of private practice expressing a person's spiritual connection, experience, and transcendental dialogue with his Lord.

e. The dimension of religious experience is a dimension that refers to social expectations that religious individuals have transcendental and spiritual experiences that affect a person emotionally. In the system of personal religious construction, this dimension is represented as a pattern of religious perceptions, experiences, and feelings because a direct relationship to God is perceived as having an important effect in real life. The general indicator can be the intensity of experience and an intangible feeling that God is indeed present and determines the aspects of life in question.

6. Internalization and Implementation of Religious Moderation in Learning Media

Viewed from a general understanding, religious moderation means promoting balance in terms of beliefs, morals, discourses, and actions as individual or group religious expressions. Religious attitudes and behaviours based on these balanced values are carried out consistently in the form of acknowledging and understanding different individuals and other groups. Religious moderation is manifested in a tolerant attitude, respecting differences of opinion, respecting pluralism, and not aggressively imposing one's will on behalf of certain religious beliefs (Azis, et al., 2019).

Indicators of religious moderation, with the principles of middle ground, balance, justice, tolerance, and equality, can be observed and

measured in individual and group acceptance of the nation's culture and ideology. The moderate attitude and behaviour of Indonesian Muslims in religion require their approval of the Unitary State of the Republic of Indonesia (NKRI) by prioritizing living in harmony, both when there are differences of religious opinion among internal believers of the same religion or with followers of different faiths. This spiritual model prioritizes tolerance for the progress of the nation and state, which is based on the spirit of diversity (Hanafi, 2019).

Based on the principles of value above, there are 4 (four) indicators of religious moderation, namely: (1) national commitment, (2) tolerance, (3) anti-radicalism and violence, and (4) accommodating to local wisdom (Azis, et al. al., 2019). National commitment' is a very important indicator to see the extent to which a person or group's religious perspective and expression towards the state ideology, especially their commitment to accept Pancasila as the basis of the state. Tolerance is a willingness to give space without disturbing other parties to believe, express faith, and express opinions, even though these are different from their beliefs and opinions. Meanwhile, anti-radicalism and violence are balanced and fair religious attitudes and expressions, which prioritize, respect, and understand wisely and wisely the reality of differences in society. Meanwhile, accommodating local wisdom is a flexible and flexible attitude and behaviour in religion, accompanied by a willingness to accept local traditions and culture, as long as they do not conflict with the basic principles of religion. It is a necessity to internalize and implement the values of religious moderation through education.

7. Learning to Use Media to Internalize Religious Values

Due to the importance of technology as a learning medium, some efforts to teach religious values to students in formal meetings and through social interactions can be effective and efficient. In line with Susilana and Riyana's statement, here are some of the benefits of learning how to use digital technology as a medium to internalize the various values of religion that can be observed in students:

a. Teaching will attract students' attention more effectively and can grow their motivation to learn.
b. Teaching materials will be more explicit in meaning so students can better understand.
c. Teaching methods will be more varied.
d. Students will participate in learning activities such as observing, doing and demonstrating.

D. Enrichment

1. Mention some indicators of religious moderation!
2. How is the implementation of religious moderation in learning media!

CHAPTER VIII

DEVELOPMENT OF LEARNING MEDIA BASED ON RELIGIOUS MODERATION

A. Introduction

This chapter will present the development of learning media based on religious moderation. There are four main topics: the concept of moderation in learning, the integration of the value of moderation in education, moderation learning, and the application of religious moderation values in creative media. Each topic will be discussed in more detail and in-depth in several sub-topics.

B. Learning Objectives

After attending this lecture, students can explain the concept and application of moderation in learning, how to integrate the value of moderation in learning, how to learn moderation, and how to apply the values of religious moderation in creative media.

C. Material

Religious moderation is one of the Ministry of Religion programs stated in Presidential Decree no. 18 of 2020 regarding the RPJMN 2020-2024. The Presidential Regulation was followed up with the issuance of the Minister of Religion Regulation No. 18 of 2020 concerning the Strategic Plan of the Ministry of Religion 2020-2024 which has planned the implementation of religious moderation and targets for strengthening religious moderation, which is carried out on an ongoing basis. Socialization of religious moderation is not only given to religious leaders and the State Civil Apparatus as agents of religious moderation but is also implemented in education.

Following up on the religious moderation program, the Ministry of Religion's Research and Development Agency 2019 published a sacred moderation book used for schools and madrasas. The book contains conceptual religious moderation, practical experience, and strategies for strengthening and implementing religious moderation. In the abstract section of religious moderation, it is stated that there are 4 (four) indicators of religious moderation, namely: 1) national commitment, 2) tolerance, 3) non-violence, and 4) accommodating to local culture (Ministry of Religion, 2019). The book on religious moderation states that there are 9 (nine) values of moderation or wasathiyah, namely: middle (tawassuth), upright (i'tidal), tolerance (tasamuh), deliberation (shura), reform (ishlah),

pioneering (qudwah), citizenship/love of the homeland (muwathanah), anti-violence (al-la 'unf), and culturally friendly (i'tibar al-'urf) (Ministry of Religion, 2020). According to research by Kawagung (2019), religious moderation is a fundamental value in social life. In connection with the importance of the value of religious moderation, this value can be translated according to environmental conditions (Walker et al, 2015).

The values of religious moderation that will be developed in schools have basically been found in character education which has been implemented first in schools and madrasas. As is known, the Ministry of National Education, Research and Development Agency for National Culture and Character Education the Ministry of National Education has identified 18 (eighteen) values originating from religion, Pancasila, culture, and national education goals, namely religious, honest, tolerant, disciplined, hard work, creative, independent, democratic, curiosity, national spirit, love for the homeland, respect for achievement, friendly/communicative, love peace, likes to read, care about the environment, care about social and responsibility (Agustina & Arifin, 2020).

Developing good behaviour as contained in religious moderation requires stages that must be passed by students. This is as expressed by Bloom that instructional objectives in learning can be grouped into 3 (three) domains, namely cognitive, affective and psychomotor, which can be applied in the provision of subjects (Magdalena et al., 2020). The theory was developed in Chrisantina's research (2019) that learning good character can be grouped into 5 (five) stages, namely knowledge, understanding, awareness, activity, and attitude implementation.

According to the research conducted by Chrisantina (2018), learning good character values can be done with the help of media according to the conditions and developmental tasks of students to increase students' interest in learning new values. In connection with this, in the context of introducing the importance of religious moderation, it is also carried out using multimedia to attract students' interest in learning new values and be better absorbed. The use of multimedia is supported by research by Omodara and Adu (2014); Malik and Agarwal (2012)

said that learning media and Multimedia technology is one of the most effective technologies used as a learning medium. Therefore, along with the development of technology, educators must also master technology in learning media.

Religious moderation is understood as a spiritual attitude that prioritizes a balance between the religious experience adhered to and respect for the religious practice of others to minimize extreme and fanatic attitudes (Sutrisno, 2019). The values of religious moderation are not only aimed at agents of religious moderation but also at students by providing internalization of the value of religious moderation through learning. As previously described, 9 (nine) values of religious moderation are instilled in students. These nine values must be universally introduced to all students so that the expected output in terms of mastery of religious moderation can be obtained evenly.

In connection with the values of religious moderation, which are a reflection of good deals, the learning carried out must meet 3 (three) good characteristics, namely as follows.1. Moral knowledge, which includes 6 (six) aspects, namely moral awareness, knowing moral values, determining perspective, moral thinking, decision making, and personal understanding. 2. Moral feelings include 6 (six) aspects, namely conscience, self-esteem, empathy, good loving things, self-control, and humility. 3. Moral actions include 3 (three) aspects, namely competence, desires, and habits (Lickona, 2015). The existence of a theory of character values education, as expressed by Lickona (2015), is in line with Bloom's taxonomy that learning must include development in terms of cognitive, affective, and psychomotor (Suyadi , 2018).

In connection with the existence of a fundamental cognitive role in mastering knowledge and its implementation, Bloom's Taxonomy is followed up with the elaboration of 6 (six) dimensions of mental processes that must be learned by students, which include remembering, understanding, applying, analyze, evaluate and create. Anderson LW, Krathwohl DR, Airasian PW, 2001).The existence of a series of theories was followed up by research conducted by Chrisantina (2019) that for learning the values of good character in a person through planting a good feeling and can be implemented in life must include

several stages, namely knowledge, understanding, awareness, activity, and implementation. Attitude.

The steps of inculcating good behaviour have been tested in the development of Human Rights Education conducted on elementary school students with decent and significant results. Learning for students not only requires the correct method but also media that is by the needs, developments in technology, and information so that it can attract students' interest in learning new things and being able to implement them in social life.

1. The Concept of Moderation in Learning

Effective learning is the main goal for teachers to encourage students to excel. The success of students is determined by the ability of teachers to facilitate students to be actively involved in learning carried out in the classroom and outside the classroom. Teacher facilitation begins with preparing lesson plans, carrying out learning activities, and conducting evaluations. The evaluation stage becomes a standard procedure to determine student achievement on mastery of predetermined learning indicators.

Student success in learning is supported by a lot of evidence that places lesson planning as a core determinant of the success of a class. Learning achievement will be achieved well when all supporting factors, such as teaching methods, can be a bridge to achieving competence (Maesaroh, 2013). Good planning is, of course, also influenced by the teacher's ability to effectively practice what has been planned to improve student learning. Learning, according to Black & William (1998), can improve student learning when practiced effectively. The development of the learning paradigm also shows promising results, although several aspects have escaped attention in learning. Teachers still rarely pay attention to the core value contained in learning activities with the evaluation process, especially the teacher's ability to pay attention to the aspect of moderation in carrying out both. The teacher has not paid attention to whether the designed learning has taken into account the value of moderation which includes learning procedures, learning designs, and learning evaluations.

a. Learning Moderation

The value of moderation is indeed something that is not always considered, although some literature has tried to raise the issue of restraint as an essential part of successful learning. The first moderation stage of education is a research-based strategy that links assessment with better learning practices by internalizing moderate values (Little et al., 2003). Learning already needs to be carried out by considering the importance of moderation in the process, especially at the decision-making stages by teachers in planning, implementing, and evaluating learning.

The concept of a moderate teacher is born from the desire to be able to carry out learning that involves educators in collaborative discussions with students about the material, indicators, and assessment criteria determined by the teacher (Little et al., 2003). This is the primary basis for building moderating values between teachers and students on what will be learned, what methods will be used, and what will be achieved. This concept is fundamental to be carried out and applied by teachers to provide opportunities for students to process correctly in accordance with their capacities and competencies. So far, there is a tendency for teachers to prepare lesson plans only referring to the syllabus analysis set by the government without considering the abilities and competencies of students, which are undoubtedly different.

b. Freedom to Learn and the Value of Moderation

This concept is in line with the Minister of Education and Culture program, which stipulates a national education program with the theme of Independent Learning (Kompas, 2019). In this case, there is the government's desire so that all students can proceed well because it is based on the essential competencies possessed by students and teachers. Independent learning means that the teacher provides learning by the level of student knowledge and student

needs, not merely an effort to achieve what has been targeted by the curriculum. Thus the typology of independent learning teachers is a moderate teacher. Moderate teachers mean teachers who, in making decisions about methods, materials, evaluations, and other supporting processes for student success, must have the approval and knowledge of students as learning participants. Thus, independent learning means that the teacher is moderate in determining the material, choosing the method, determining the level of questions posed to students, and being moderate in deciding student grades.

Moderation in education was firstborn in an article about Moderation and Teacher Learning; what can research tell us about their interrelationships? (Hipkins and Sally, 2011) from the New Zealand Council for Educational Research on research that focuses on teacher learning through social moderation found that so far, learning has not touched the aspect of teacher professional insight in being moderate in teaching. The findings of this study became the primary basis for this research design that the concept of moderation in education, especially in the process of internalizing moderate values in learning, already needs to be a concern for teachers so that students or students can follow the learning process by their competence in terms of knowledge, skills, and attitudes. This process will result in equal, fair, and transparent action and treatment in learning.

2. Integration of Moderation Values in learning

Learning in schools in Indonesia, in general, has not yet made the concept of moderation an essential variable of concern for teachers in making decisions in learning. In the general idea, the value of moderation in education can be integrated before, during, and after the implementation of the assessment (Maxwell, 2002). This means that the value of moderation can be used as a core value for teachers in preparing lesson plans, implementing learning, and implementing learning evaluations and assessments. Learning

that denies moderate values can be found in the procedures used by teachers when analysing student differences in terms of basic knowledge and experience before determining the subject matter. This is because the teacher, in compiling material and material indicators and subject matter, still strictly refers to the syllabus set by the government. This condition affects the gap in students' ability to understand and master the material taught by the teacher. Likewise, the teacher's decision in choosing learning methods and media does not consider the aspect of moderation in its determination so that not all students can actively participate in learning with the methods and media chosen by the teacher.

Little et al. (2003) suggested several teacher characteristics, including (1) Assessing student performance more consistently, effectively, confidently, and fairly; (2) Building general knowledge about curriculum expectations and achievement levels; (3) Identifying strengths and areas of growth based on evidence of student learning; (4) Adapt and acquire new learning by comparing one's thoughts with the thoughts of others, whether students or teachers; and (5) Sharing effective practices to meet the needs of all students, monitor progress, and celebrate growth. The whole process must have the value of accountability, fairness, transparency, and communication between students and teachers. According to Little et al. (2003), the most potent aspect of teacher moderation is a discussion involving students in conducting assessments and collectively sharing effective strategies in planning the next steps for learning.

Theoretical support for this concept is found in research at universities in Turkey that to encourage universities to improve the quality of standards that are equivalent to international standards, they must have the quality from various aspects such as the quality of teaching and learning, students, programs, graduates, resources, and good governance. Balanced must include comprehensive moderation (Wasatiyyah) in achieving the best as a provider of knowledge for the nation (Hj. Yaakub & Othman, 2018). This study found the position and position of moderation as a determining element of the success of

educational institutions in improving their quality. The implementation of restraint in its basic concept can involve different school teachers, not only in certain institutions, for example, in setting assessment standards in one subject that must consider students' social conditions and even the use of ICT media in learning (Adie, 2008). The value will be the same even though the students' scores are different because of the technology variables that students can take advantage of while other students do not. While Sadler (1998), as cited in Wyatt-Smith et al., 2010), describes three sequential components of a teacher's assessment of student work; teachers pay attention to learner work, assess work by standards, and make responses or assessment results. At each decision point, at these three stages, different teachers may use different types of resources when making assessments, and conclusions will also be different while the results of student work or student work are the same.

3. Moderation Learning with Media

Religion teaches students to be able to carry out and create the life of rahmatan lilalamin so that students gain a balanced understanding of religion by the teachings of religious values and avoid justification for certain groups by paying attention to social, moral, and moral values. Innovation is an activity that aims to develop the practical application of new scientific values and contexts or new techniques to apply existing science and technology; this is based on Law No. 18 of 2002 (Udin Syaefudin, 2014). Educational media are facilities and infrastructure to carry out learning activities through the development of visual and auditory functions (Herry Noer Aly, 1999); It becomes important to conduct innovative religious moderation learning by utilizing creative media.

Innovation and creative media, as well as efficiency, are an inseparable part of the current study of religious moderation education learning. Therefore, it is necessary to study further related problems: How is Religious Moderation Learning Innovation in Schools / Madrasas that use creative media. The function of learning media is to foster learning motivation, learning is understood more quickly by students, and learning

methods are varied, so students are not bored; more students activities when learning, including demonstrating, observing, and acting. Students can interact directly with the surrounding environment. Religious moderation must be understood as a spiritual attitude that is balanced between the practice of one's own religion and respect for the religious traditions of others with different beliefs (Muslim, et al., 2019). This balance or middle ground in spiritual practice will undoubtedly prevent us from being extreme, fanatical, and revolutionary in religion. Utilization of Creative Learning Media.

a. Audio Media

Conditions for implementing learning during the coronavirus some essential competencies cannot be achieved because, during the pandemic, students and teachers cannot interact with the community. The material is only taught. Theoretically, there is no field practice (using audio and visual). For example, when discussing the issue of religious tolerance as an external factor driving social integration that should be taught in face-to-face learning only takes two meetings or four times forty-five minutes of learning material carried out for four days (the media used is audio), with learning/scenario steps for assignment techniques carried out on google classroom, discussing on the Padlet application (using visual media) and virtual face-to-face presentations through zoom meet (using audio-visual), learning achievement is only a maximum of 75 percent of all the material taught.

The Minister of Education's instruction stated that teaching educators do not target curriculum completeness but instead target students' motivation to enter and follow online and target ethics, Akhlakul karimah. To measure students' morals and behaviour, the teacher prepares observation sheets to assess students' attitudes. There are cognitive, affective, and psychomotor assessments in the lesson plan. For implementing learning before the coronavirus, students were tasked with making observations in the community regarding the material taught by the teacher; one example of the empirical practice is students observing

forms of social inequality between traditional and modern markets, poor and rich people. Social inequality.

The curriculum in madrasas discusses the implementation of the madrasa curriculum, namely teaching and learning activities that include activities inside and outside the classroom. One of the differences between the 2013 and previous curricula is that all stakeholders have an essential role in implementing the curriculum so that they can meet clear and steady subject standards based on their outputs. More importantly, the 2013 curriculum requires teachers to be more creative and innovative. Teaching staff in madrasas is necessary to achieve curriculum goals by constantly trying to improve quality by becoming learning teachers by activating performance and skills. In this case, teachers are directed to attend seminars and workshops to support curriculum implementation.

Contemporary learning issues each have advantages and disadvantages. When face-to-face learning is direct, education is very effective because teachers and students in the communication learning process can run smoothly. Teachers, in this case, can see directly by assessing the ability of students to understand the lessons given. Weaknesses in the face-to-face learning process require classroom facilities. They can foster an understanding of science directly by influencing the psychology of students so that they can instil good ethics. In this learning process, the media used is audio.

b. Visual Media

Asynchronous learning uses several Learning Management Systems (LMS), such as Google Class Room and Padlet. The padlet application consists of LMS, types of learning media consisting of Synchronous and Asynchronous), Canva (used to create bulletins and power points), and Quizizz. In asynchronous applications, it is used to upload student materials and assignments. A-Synchronous is a different learning time of the same media, for example, WhatsApp. Learning innovation process that utilizes creative media. The learning media was

chosen because it is easier for students to use, then more efficient than the use of internet data. Besides that, the application makes it easier for students to interact with each other because everything is online-based; students can innovate and choose existing templates so that students creativity experiences progressivity.

The development of the above media so that students become interested in the learning process to take advantage of the Padlet, Canva, and Kinemaster applications requires high enthusiasm and courage to try because everything is online-based, and its features can be saved, deleted, and modified according to the imagination and inspiration of the user. The expected impact after utilizing the learning media is an increase in the motivation and frequency of students' learning participation through online learning so that each material and task can be completed according to the scheduled time. The growth and development of innovation and creativity, as well as the enthusiasm to use learning applications as the first step to move forward. Problem Based Learning (PBL) learning strategy.

In learning social norms, students are tasked with analysing the problem of violating social standards in society. The analysis results are then uploaded to the padlet interactive wall application. Evaluation of learning innovation using google forms (used for exams, making students absent) and Quizizz, a daily test application. Use of online media by collecting assignments through visual media, namely WA and classroom.

Furthermore, the results are conveyed through seminars or forums using media prepared at schools or universities. The most popular media for students is YouTube media about events or events experienced by countries in the world; after observing media on YouTube, students provide explanations through classroom media. Online media is used in visual form. The evaluation of learning carried out during this pandemic is by utilizing the google form and the quizzes application (daily test application). The evaluation remains in the form of questions but is more

interesting because students evaluate while playing a drama. The internal strength of the learning process in general before the corona pandemic was planned for digital schools. The inner strength of the religious moderation learning process is that schools conduct application training by teachers who have attended national instructor training on using online media through creative media padlets.

c. Audio-Visual Media

Contemporary learning conditions during the Covid-19 pandemic for learning use two approaches, namely the Synchronous and Asynchronous approaches. In synchronous learning, it is used for virtual face-to-face learning; at that time, the teacher conveys essential competencies and indicators of competency achievement, discusses learning materials, and presents student assignments through the Zoom Meet and Google Meet applications. What is meant by asynchronous is learning together at the same time with shared media, for example, zoom meet, google meet. The combined learning method of online through zoom meet and offline padlet with examples of the subject matter of Social Norms. Before learning social norms, students are tasked with analysing articles on violations of social norms before learning begins. The teacher assesses the results of student analysis through the padlet application. At the next meeting, the teacher did virtual face-to-face to give assignments to several students to present the results of their research.

Religious Moderation Learning Innovations through Creative Media by directing students to open YouTube, for example, videos about social, associative, and dissociative interactions. And for the virtual face, use zoom meet and WA. The learning media used during the pandemic are the internet, Wi-Fi, and learning application applications such as classroom, zoom meet, Google Forms, Kahoot, and WA. The types of media used are laptops, computers, the internet, digital textbooks, and so on. Media use among teachers and students is widespread, and even every

learning uses both electronic and print media. Before the pandemic, online media was used for about 50% of knowledge.

4. Religious Moderation Values in Creative Media

a. National Commitment

Understanding of national commitment is given to students by understanding that in everyday life, students must recognize and understand the attitude of nationalism and patriotism. Media use among teachers increases the intensity of learning, especially during the pandemic. For virtual face-to-face, most teachers use Zoom Meet; for non-virtual face-to-face, most teachers use Google classrooms, but the maximum duration during the pandemic is 30 minutes; of course, it's not the same as before the pandemic. Online media is more widely used in distance learning; WA, google classroom, padlet, and canva.

Offline media are textbooks that are in school libraries, newspapers, magazines, and around. Through learning about multicultural society, differences, and social harmony. Commitment to the nationality of the media used Audio-visual: showing films about the people of Bhinneka Tunggal Ika, different but still one; even though we have other religions, ethnicities, and cultures but we are still one, the Unitary State of the Republic of Indonesia is a fixed price. Media used in learning to maintain a national commitment to students: by using objects to bring students on pilgrimages to the graves of heroes of independence, and historical museums, showing historical things related to autonomy. Visual motion audio playing struggle films, lectures from religious leaders and national leaders about how to love the nation.

b. Tolerance

Understanding tolerance, students are given the understanding to respect the opinions or thoughts of others who are different and help each other or live side by side regardless of

ethnicity, race, religion, and between groups. Media that used to provide an understanding of the importance of religious tolerance to students by using audio: giving lectures and knowledge that in Islamic teachings, it has been explained that we are different or have tribes. Telling the form of tolerance practiced at the time of the Prophet in Medina through Audiovisual: playing videos about the conditions of life and religious tolerance in several places.

The media used to provide an understanding of tolerance, audio-visual, playing videos in social life, need tolerance for mutual respect, giving input to each other, even between religious communities must be tolerant of each other in worship, in living life they need to work hand in hand and respect each other without having to distinguish between religions. There is mutual respect and understanding of tolerance between students and teachers, and in the school environment.

c. Anti-violence

Anti-violence in student learning can be implemented in conflict and violence learning materials. In this lesson, the teacher tries to instil the central concept of avoiding conflict in everyday life by emphasizing the accommodation of win-win solutions when facing problems in daily life through Canva interactive media, where students are given the task of making an understanding of anti-violence. The print media distributed religious books about the importance of loving the nation. The media used in social studies learning to control radical actions (anti-violence) audio, print, shows an example of problem-solving not always having to use physical. Still, problems can be resolved through deliberation and can be done through the confirmation of cooperation and accommodation.

The media used for learning material on anti-violence students were given assignments in the media or links to observe

and listen to the incident. By understanding anti-violence, students can understand what can harm themselves and protect the good name of the school and their families.

d. Accommodating Local Culture

Local wisdom provides an understanding of the cultural part of a society that cannot be separated and passed down by culture from generation to generation. The media used is synchronous: face-to-face media used zoom meet and google meet. Then non-face-to-face synchronous use is used in google classroom, Quizzes, padlet, and Canva. Google forms for exams for making student attendance, Quisizz is a daily test application, and Canva for making online teaching materials, bulletins, power points online. Padlet is a type of LMS application that consists of Synchronous and A-Synchronous. The media used to provide an understanding of the importance of maintaining and implementing local wisdom by using audio: providing experience and explanation of local knowledge that can be applied in everyday life such as Malempu (honest) in behaviour, Getting (istiqomah), Barani (Brave)) speak the truth in all situations. Using audio motion visuals: playing films about examples of local wisdom that students must maintain in their daily lives. Using objects: visiting places and things related to local knowledge and explaining to students.

D. Enrichment

1. Give the explanation about the concept of moderation in learning!
2. What are some creative media that can be used to teach religious values in learning!

CHAPTER IX

OBJECT-BASED MEDIA DEVELOPMENT

A. Introduction

This chapter will present the development of object-based learning media. There are four main topics: the definition of object-based learning media, types of object-based learning media, benefits of object-based learning media, and advantages and disadvantages of object-based learning media.

B. Learning Objectives

After attending this lecture, students can explain the definition of object-based learning media, types of object-based learning media, benefits of object-based learning media, and advantages and disadvantages. Students are also expected to be able to apply the use of object-based learning media in teaching.

C. Material

1. Definition of Object-Based Learning

Media, in essence, is a means to make it easier for teachers to convey material and make it easier for students to understand the material presented by the teacher. The use of media in learning can be created by students and teachers with improvised materials, for example, by using used goods and items around the school or the environment as a learning medium.

Meanwhile, according to the Big Indonesian Dictionary, concrete is honest and really exists (tangible, can be seen, can be touched, etc.). So concrete media is anything substantial that can be used to channel messages from the sender to the recipient so that it can stimulate the thoughts, feelings, concerns, and interests of students so that the learning process can run more effectively and efficiently towards achieving the expected goals. In addition, another definition of concrete object media is an actual object that will provide a significant stimulus for students in learning various things, especially concerning the development of specific skills.

Concrete media is the most accessible tool because we don't need to make preparations other than using it immediately. What is meant by natural objects as media is a means of conveying information in the form of actual or original objects or objects and has not undergone significant

changes. As a real object, concrete media is a tool that can provide a direct experience to users. Therefore, factual media are widely used in the learning process to introduce new subjects. Concrete media can give real meaning to things previously only described abstractly, namely by words or visually.

The concrete objects can be obtained around us, such as stones, dry leaves, marbles, books, pencils, tables, shoes, socks, handkerchiefs, spoons, plates, and others. Children, especially low-grade students, will get a lot of information by interacting with real and exciting objects so that children's understanding will be more easily formed. This is also supported by an explanation regarding the stage of child development. According to Piaget, there are 3 stages of child development:

a. behave intuitively ± age 4 years
b. operating concretely ± age 7 years
c. operate formally ± 11 years old.

Based on the above understanding, it can be concluded that these concrete objects are actual objects, objects, or media that help students' actual experiences.

Real experience or direct experience is the experience that students get as a result of their own activities. Students experience and feel for themselves everything related to the achievement of goals. Students relate directly to the object to be studied without using an intermediary. Because of this direct experience, there is a tendency for the results obtained by students to be concrete so that they will have high accuracy.

2. Types of Object-Based Learning

Media Concrete media is divided into two types: the actual object media and the substitute object media. (Mulyati, 2016).

3. The Benefits of Object-Based Learning Media

The media's primary function is as a teaching aid that also influences the climate, conditions, and learning environment arranged and

created by the teacher. Levie Lentz in Azhar Arsyad (Arsyad and Azhar 2003) suggests four functions of teaching media, namely:

a. Attention Function, which attracts the attention of students to concentrate on the content of the lesson displayed
b. Affective part, namely the press, can arouse the emotions and attitudes of students, and students can enjoy learning
c. Cognitive Functions, namely the media, facilitate achieving goals to understand and remember the information or messages.
d. Compensatory function, namely, the media, accommodates weak and slow students to accept and understand the content of lessons presented with text/verbal.

The functions of concrete media include:

a. A tool to create an effective teaching and learning situation;
b. An integral part of the overall teaching situation;
c. Laying concrete foundations and abstract concepts to reduce verbalises understanding;
d. Develop student learning motivation;
e. Enhancing the quality of learning.

4. Strengths and Weaknesses of Object-Based Learning Media

a. Strengths:
    1) Generating conceptual ideas or ideas, thereby reducing student misunderstandings in learning it
    2) Increases student interest in learning the subject matter
    3) Provides real experiences that stimulate self-activity to learn
    4) Can develop thoughts Continuous
    5) Learning Provides experiences that are not easily obtained through other materials and makes the learning process deep and diverse.
b. Weaknesses:
    1) Bringing students to various places outside of school sometimes has risks in the form of accidents and the like

2) The costs required to hold various natural objects are not small and have the possibility of damage in using them.

The existing weaknesses should be overcome by using the media or concrete objects around the school, which can be used as a support in the learning process. adapted to the learning material, and keep trying to bring natural things into the classroom are helpful in explaining the material. Class scope.

From the description above, it can be emphasized that using concrete or real media during the learning process will be better than lecturing. Because the existence of learning media can help to clarify what we convey and stimulate students to learn. Thus, with concrete object media, students become more active in learning and have the same experience and perception of the concepts being studied.

D. Enrichment

Answer the following questions carefully!

1. How to apply concrete media in an English lesson? Give an example!
2. Given the weaknesses of concrete media, explain how to overcome them!

CHAPTER X

AUDIO VISUAL-BASED MEDIA DEVELOPMENT

A. Introduction

This chapter presents the development of media based on audio-visual media. The main topics that will be discussed are understanding audio-visual-based learning media, types of audio-visual-based learning media, and the advantages and disadvantages of using audio-visual media.

B. Learning Objectives

After attending this lecture, students can explain the meaning of audio-visual-based learning media, the types of audio-visual-based learning media, and the advantages and disadvantages of using audio-visual media.

C. Learning Materials

1. Definition of Audio-Visual-Based Learning Media

The use of media in the academic world has an important role other than as a teaching material; the use of media is an intermediary for delivering material to students. Simplification of material by utilizing the media today has become a positive trend. At least teaching and learning activities are not only focused on the teacher's presentation in front of the class. In addition, students can still learn even though they are not in the classroom.

The word media comes from the Latin "medius," which literally means "middle," "intermediary," or "introduction." While in Arabic, "media" is defined as an intermediary or messenger from the sender to the recipient of the message (Arsyad and Azhar 2003). Furthermore, the Association of Education and Communication Technology (AECT) is the basis for developing learning technology provides limitations on the meaning of media, namely as all forms and channels that can be used to convey messages or information. The National Education Association (NEA) in Nunuk Suryani, et al (Suryani 2021)135) gets its own limitations on the meaning of media, namely as a form of communication both printed, audio-visual, and all the equipment.

According to Yudhi Munandi (2008:55), audio-visual media involve the senses of hearing and sight directly in one process. The types of messages that can be distributed are verbal messages and non-verbal messages.

According to Syaiful Bahri Djamarah, et al (2013:124) audio-visual media have sound and image elements. This type of media has a better ability because it includes two media in delivering information or, in this case, learning material.

According to Wina Sanjaya (Sanjaya 2008, 2118)(2014: 2118), audio-visual media is a type of media that, in addition to containing elements of sound, also includes aspects of images that can be seen, such as examples of video recordings, films, sound slides, and so on.

Based on some of the expert opinions above, it can be concluded that audio-visual media is media with sound and image elements that are used simultaneously and can be used as intermediaries in conveying the content of messages, information, and teaching materials to achieve learning objectives.

2. Types of Audio-Visual-Based Learning Media

Audio-visual media that can be used in learning are basically divided into two categories; according to Syaiful Bahri Djamarah (2013: 125) the division of the two categories are:

a. Silent audio-visual, namely media that convey sound and still images such as sound slides, sound series films, and good prints.
b. Audio-visual motion, namely media that can display elements of sound and moving images such as sound films, video cassettes, television, and the like.

Arief S. Sadiman, et al (Sadiman and S 2010, 67) stated that audio-visual media can be in the form of:

a. Movie

Film is a medium that can enormously help the learning process. According to Azhar Arsyad (Arsyad and Azhar 2003, 50), films move quickly and alternately and provide continuous visuals. The film has its own charm because it shows vivid images and sound. This type of media can present information, describe processes, explain complex concepts, teach skills, shorten or extend time, and influence attitudes.

b. Television

Television is defined by people from the word television audio-visual, which means a tool/means for channelling images (sound images). The television set was invented by a German named J.L. Baird in 1926, followed by Americans in 1941. It is still black and white television. It was only in the 1960s that colour television could be invented. Television can be used as a medium of learning because with television, viewers can add socio-cultural knowledge, insight into thinking, attitudes, and the possibility of other skills.

In broadcasting ideas, television is multi-dimensional, meaning that apart from being able to hear and see what is being broadcast, it is hoped that it will also affect motivation, attention, creativity, imagination, and emotion.

The contents of broadcast television programs can be in the form of science and matters relating to the economy, politics, society, culture, government, defence and security, environment, and community.

Submission of messages, information, or learning materials through television media can use examples of broadcast forms, including:

1) Lectures means that through television, a person can convey his ideas by lecturing.
2) Interviews means that television programs can present their broadcasts in the form of questions and answers/interviews
3) Discussion, meaning television. Also broadcasts the ideas of several people by way of discussions or panel discussions
4) Play/show means that the idea of a group of people can be realized in the form of a play.

The advantages of using television as a learning medium are::

1) Presenting images and sound together
2) Very eye-catching for the audience
3) Sparking curiosity in children so as to encourage the emergence of children's creativity.

4) Authentic broadcast news and always up to date
5) Television can overcome the lack of time. The events that have occurred in the past can be rebroadcast via television.
6) It can overcome the problem of place. Television can broadcast events in another location, but the results can be enjoyed in a different location
7) Can follow the subject matter, which is broadcast centrally in a different room.
8) Can foster a desire to acquire knowledge and skills.
9) Television broadcasts can increase the treasury of knowledge, broaden horizons and sharpen or hone thinking power.

In addition to having advantages, television as a teaching medium also has several disadvantages, including:

1) Communication is only one way;
2) The desired program is not always on television;
3) In making the program requires high costs;
4) It takes a long time to make a television program;
5) In certain aspects, experts are needed.

c. Videos

Moving pictures accompanied by sound elements can be displayed via Video Compact Disk (VCD). This type of learning media can be broadcast and is often used as a type of distance learning media to deliver learning material. While the content of the video itself can be factual (current news, important events, and news) and can also be used for fictitious things (stories, fairy tales, and the like). The videos can be grouped into three types: informative, educative, and instructive.

Video has several features that help the learning process, such as a playback feature so that the material can be played repeatedly until students can understand the whole material. In addition, the slow motion feature can also be good learning support because it can increase the focus of students.

Video shows can be used to convey material on various subjects, such as in English lessons; teachers can present videos discussing how to make speeches, how to submit English language material or others. So that the learning process is not only focused on hearing and understanding, but students become active in seeing, hearing, understanding, and practicing directly the new things they get.

Here are some advantages of using video as a learning medium:

1) Can record events at once with their voice and can be played back. Thus past events can be observed again
2) Videos are suitable media for all fields of study and for all grade levels
3) Video can make in slow motion so that the movements or what is recorded can be observed really.

Nevertheless, video learning media also has several weaknesses and obstacles in its use; here are some of the challenges that are often encountered in its use:

1) The nature of communication is only one-way without reciprocal communication
2) Using videos, students are constantly glued to watching, not following
3) The equipment used is expensive
4) Must use electricity

d. LCD Projector (Liquid Crystal Display)

LCD projector (Liquid Crystal Display) is one of the optical and electronic devices. The system works to produce bright light so that it can project writing and images that can be adequately emitted onto the screen (Hujair, 2015: 144).

LCD media is an electronic device in the form of a projector screen that displays visual images as an educational tool that can be used to achieve learning objectives.

The purpose of using an LCD projector is as a learning medium that can provide a visual display of detailed teaching materials so that students can learn and activate new stimuli to the activeness of students in the learning process.

The following are some of the preparations needed by teachers in using LCD projectors as teaching media, including:

1) Teachers understand and master the use of computers and LCD projectors
2) Understanding and mastering slide shows
3) good use of colour and visuals
4) Animation and photos to taste
5) Use slide shows sparingly.

e. Computer-Based

Media Today, computers have different functions in education and training. The computer is a manager in the learning process known as Computer Managed Instruction (CMl). There is also the role of the computer as an additional aid in learning; its use includes the presentation of information on the content of the subject matter, exercises, or both. This model is known as Computer Assisted Instruction (CAl). CAI supports learning and training but is not the primary deliverer of the subject matter. Computers can present information, and other learning stages are delivered not using computer media.

According to Azhar A (1997), the use of computers as learning media generally follows the following instructional process:

1) Plan, organize and organize, and schedule lessons
2) Evaluating students (test)
3) Collecting data about students
4) Conduct statistical analysis of learning data
5) Make notes on learning progress (group or individual).

The format for presenting messages and information in CAI consists of programmed tutorials, intelligence tutorials, drill and practice, and

simulations. A programmable tutorial is a pre-programmed set of both static and dynamic impressions. A small group of information is displayed, followed by a question. Students' answers are analysed by computer (compared with possible solutions programmed by the learner/teacher/designer) and appropriate feedback based on the analysis results.

Simulations on computers provide opportunities for dynamic, interactive, and individual learning. Complex work environments can be styled with simulation to resemble the real world. In addition to the principles of print-based media, the principles of screen design need attention for the development and use of the computer-based press as follows:

1) A computer screen/monitor is not a page, but a dynamic display that moves slowly.
2) The screen should not be overcrowded, divided into multiple viewings, or start simple and slow and add up to the desired level of complexity.
3) Choose a standard, simple typeface; use both capital and lowercase letters, not all capital letters.
4) Use between seven and ten words per line as it is easier to read short sentences than long ones.
5) Try to avoid the following:
   - Cut off the word at the end of the line
   - Start a paragraph on the last line on one viewing screen
   - Ends the paragraph on the first line of the display screen
6) Two-spaced spacing is recommended for better readability.
7) Select certain font characters for titles and keywords, for example, bold, underline, italic.
8) Text is boxed when it is placed together with graphics or other visual representations on the same display screen.

The interactive concept in learning is most closely related to computer-based media. Interaction in a computer-based teaching environment generally follows three elements, namely: (1) customizable instructional sequences, (2) student answers/responses or work, and (3) customizable feedback. To engage higher-order thinking skills, the tasks presented through this medium must be able to allow and account for more than one correct answer, creativity, and differences in solving caused by students' inhomogeneous prior knowledge. To improve the interactive capabilities of computer-based media, several things need to be considered in developing the press:

1) Consider using a problem-centred design, case study, or simulation in which students are mentally engaged with the presentation. Programs like this begin by stimulating and engaging students' minds actively.
2) Make a brief instructional presentation, then ask students to process or think about the information presented.
3) Provide opportunities to interact at least every 3 or 4 screens, or every minute or two.
4) Consider a design in which students are not given information in a linear form, but try to find information through active exploration in an electronic environment.
5) Consider allowing students to connect with other computer users through models or electronic information boards. Students may be asked to share creative writing, problem-solving, or decision-making with other students in remote locations.
6) Do not force interaction, for example, avoid questions that simply want to get students' answers.

f. Telematics Media

Often associated as the latest product of technological civilization which will eventually replace television.

The telematics device includes several units. In the middle, there is an image display unit that is connected to a computer network.

Telematics media, often called new media, became known in the 1980s, are electronic technology devices with different uses. Electronic media devices include several technological systems, namely:

1) Transmission system (via cable or satellite)
2) Miniaturization system
3) Information storage and retrieval system
4) Image presentation system (using a flexible combination of text and graphics).
5) Control system by computer.

There are main characteristics of telematic media:

1) Decentralization, procurement, and selection of news are no longer entirely in the hands of communication suppliers.
2) High delivery capability via cable and satellite overcomes communication barriers caused by other broadcast transmitters.
3) Reciprocal communication (inter-activity), recipients can choose, answer back, exchange information, and be connected with other recipients directly.
4) Flexibility, form, content, and use.
5) New telematic media, giving impetus to the distribution of radio and television broadcasts.

Telematic media is divided into two forms, namely:

1) Teletext (Teletext)

   Using Teletext allows more additional textual information to be obtained through air broadcasts. Teletext is used to complement regular television programming by tuning the receiver. This information can be obtained at any time according to the user's wishes.

2) Text videos

Text video cables can deliver information stored with computer systems in more extensive and more varied quantities and can be consulted or questioned by users equipped with a television screen. Video text also provides a wide range of mutual (interactive) services, including visual communication between the center and its surroundings or, in principle, between all users connected by the same network. Video text can also be used by users who use suitable receivers to obtain printed information provided by other new media such as:

- Computer video games (telematic).
- Video program (not telematic) or recorded film for playback.

3) Videodisc

Video Disk is a device that uses laser technology and is characterized by excellent image and sound clarity, flexibility, and ease of use. In general, this media can bridge several media (radio, film, and television), but also the difference between personal communication activities' limits and mass communication activities' limitations. This media can be used interchangeably for private and public interests. At the beginning of its development, new media included media or the result of visual-hearing media (pre-existing audio-visual). The product does not require much-centralized administration (as is typical of film and television) and is not integrally linked to distribution (as is the case with most television and radio), nor is it centrally controlled. (Sunaryo and Jonasih 1995)

3. Advantages and Disadvantages of Utilizing Audio Visual Media

a. The advantages of audio-visual media

1) By using video (with sound or not), we can re-show certain movements. The motion shown can be in the form of a suitable

stimulus or in the form of the expected response from the student. For example, a short program (vignette) shows people's interaction. This program lets students see what "should or shouldn't" is done.

2) With videos, students' performances can be immediately reviewed for criticism or evaluation. The trick is to record selected activities, such as developing interpersonal skills, such as interviewing techniques, leading courts, giving lectures, and so on. All of this is intended to strengthen students' mastery of a skill before plunging into the natural arena.
3) By using certain effects, both the learning process and the entertainment value of the presentation can be strengthened. Several types of visual effects that can be obtained with video include shortening/extension of time, depiction of several events taking place simultaneously, "split / multiple screen image" (on the screen, two or more events are seen), smooth shifting from one image/scene to another. picture/next act, and motion explanation (slowed down or accelerated).
4) You will get the complete content and arrangement of the lesson/practice materials, which can be used interactively with workbooks, manuals, textbooks, tools, or other objects, usually for the field.
5) Information that can be presented simultaneously at the same time in different locations (classes), and with an unlimited number of viewers or participants, by placing monitors (television sets) in classes.
6) An independent learning activity where students learn at their own pace can be designed. These separate activity plans are supplemented or combined with computer assistance or printed materials.

b. The limitations of audio-visual media

1) When it will be used, the video equipment must be readily available at the place of use; and match the size and format of the pica video that will be used.
2) Writing a script or video scenario is not an easy and time-consuming job.
3) Video production costs are very high, and few people can afford them.
4) If the image on the pica video is transferred to the film, the result is poor.
5) Small monitor screens will limit the number of viewers unless network monitors and video projection systems are expanded.
6) the number of fonts in graphics for video is limited, which is half the number of graphics letters for movies/images.
7) If you use colour graphics on a black and white TV, be very careful. For example, red and green colours with a specific density will look the same on a black and white TV screen. As much as possible, try to make graphics with black and white colours or groups of grey.
8) Rapid changes in technology have made video system limitations an ongoing problem.

4. Components of developing audio-visual media in making audio-visual learning media.

These components are:

1) Manuscript is a story text displayed by the players, which contains learning messages to be filmed, usually in the form of a documentary script or a dialogue script consisting of several film players. The manuscript is made by the teacher concerned in consultation with several other experts, such as content experts, communication experts, and others.

2) Director when making audio-visuals or films, of course, it is essential to have a director who manages the recording sequence so that it can run according to plan and succeed effectively and efficiently.
3) Cameraman The cameraman is the person who records all the scenes that are filmed. This technician must have exceptional skills because otherwise, it will produce a less or even unsatisfactory recording. In addition, it can also hinder the speed of completion of the audio-visual media created.
4) Film player runs a recording of audio-visual media, it cannot be separated from the players who play a role in the scene, even if they just walk or sit without making a sound because they are used as media to be explained or otherwise. This player must be very skilled because otherwise, it will slow down the completion of the recording process.
5) A set of tools for filming and editing After all recordings are complete, the last step is editing, using a set of editing tools like a film, because there may be something that needs to be added with other animations, or there are scenes that are cut, spliced, and some even need to be added. It must be dubbed.

D. ENRICHMENT

Answer the questions below properly and correctly

1. What are the benefits of using audio-visual media?
2. Explain the advantages and disadvantages of audio-visual media as a learning tool!

CHAPTER XI

INTERACTIVE/ MULTIMEDIA MEDIA DEVELOPMENT

A. Introduction

This chapter will present the steps for developing interactive learning media in compiling learning media. There are ten steps for creating interactive learning media, which will be explained in detail and in detail these steps.

B. Learning Objectives

After attending this lecture, students can explain the steps for developing interactive learning media in compiling learning media.

C. Material

Until now, interactive learning media have not developed optimally in Indonesia. One of the obstacles to creating interactive learning media is the lack of mastery of interactive media development technology by teachers/tutors and managers of educational institutions in Indonesia.

Learning material development software, such as Course Builder, Author ware, and Dreamweaver, is quite complicated, so it is only controlled by computer programmers or people proficient in the world of informatics. As a result, developing interactive learning materials with computers is less than optimal.

The development of interactive learning media can be optimal if there is a collaboration between computer programmers and teachers/tutors. It is perfect for a teacher/tutor to master computer programs if you want the ideal. The purpose of this training material is to make interactive learning media easy, even for people who are computer-blind.

1. Definition of Interactive Multimedia

According to Munir (2012:2) "multimedia comes from the words multi and media. Multi- comes from Latin, which means many or various kinds, while the word media comes from Latin, namely medium, which means intermediary or used to deliver, convey or carry something. Medium in American Heritage Electronic Dictionary (in Munir, 2012:2) is described as a tool for distributing and presenting the information. Based on that, multimedia is a combination of various media (file formats) in the form of text, images (vector or bitmap), graphics, sound, animation, video, interaction, and others that have been packaged into digital files (computerized), used for conveying or deliver

messages to the public. Based on the opinion of Tolhurst, Neo & Neo (2004: 119) states that "Multimedia, defined, is the combination of various digital media types such as text, images, sound, and video, into an integrated multisensory interactive application or presentation to convey a message or information to an audience. Warsita (2008:153) also defines "multimedia as a combination of many media or at least consisting of more than one media." A multimedia is a computer equipped with a solid disc player (CD-player), sound card, and loudspeaker that can process motion pictures, audio, and high-resolution graphics. In line with the two previous opinions, Ahmadi and friends.(Gilakjani, Ismail, and Ahmadi 2011, 2011) "multimedia is media that combines two or more media elements consisting of text, graphics, images, photos, audio, video, and animation in an integrated manner." Multimedia is divided into two categories, namely: linear multimedia and interactive multimedia.

Linear multimedia is multimedia that is not equipped with any controller that can be operated by the user. This multimedia runs sequentially (sequentially), for example, TV and movies. Interactive multimedia is equipped with a controller that can be operated by the user so that the user can choose who he wants for the following process.

2. Learning Media

Media is a tool that can convey messages (Bovee, 1997). Learning media is a tool that serves to convey learning messages. Learning is a communication process between learners, teachers, and teaching materials. Communication will not run without the help of getting messages or media. Stimulus forms can be used as media, including human relationships or interactions, reality; moving pictures or not; recorded writing, and voice. These five forms of stimulus will help students learn the learning material. However, getting all five forms at one time or place is difficult.

Computer technology is an invention that allows presenting some or all of the above forms of stimulus so that learning will be more optimal. However, the problems that arise are not as easy as imagined. A teacher is a person who

can realize the five forms of stimulus in the form of learning. However, most teachers cannot present the five stimuli with a computer program, while computer programmers do not master knowledge.

The solution is to realize these stimuli in a computer program using software that is easy to learn so that teachers will easily realize their teaching ideas.Good learning media must meet several requirements. Learning media must increase learner motivation. The use of media has the aim of providing inspiration to learners. In addition, the media must also stimulate learners to remember what they have learned and provide new learning stimuli. Good press will also activate students in giving feedback and also encourage students to practice correctly.

There are several criteria for judging the effectiveness of a medium. Hubbard proposed nine criteria for judging it (Hubbard, 1983). The first criterion is cost, the cost must be judged by the results to be achieved by using the media. Another criterion is the availability of supporting facilities such as electricity, compatibility with class size, conciseness, adaptability, setup time and effort, impact, complexity, and, last but not least, usability. The more learning objectives can be assisted by a media, the better the media.

The above criteria are more for conventional media. Thorn proposed six criteria for assessing interactive multimedia (Thorn, 1995). The first assessment criterion is ease of navigation. A program should be designed as simply as possible so that students do not need to learn computers first. The second criterion is the content of cognition; the other criterion is knowledge and presentation of information.

These two criteria assess the content of the program itself and whether the program has met the learning needs of the learner or not. The fourth criterion is media integration, where the media must integrate aspects and language skills that must be learned. The program must have an artistic appearance to attract students, so aesthetics is also a criterion. The last assessment criterion is the overall function. The program developed must

provide the learning desired by the learner. So that when a person finishes running a program, he will feel he has learned something.

3. Media Functions in Learning Communication

In essence, learning is a process of communication between teachers and students. As communicants in the above learning are students, communicators are teachers and students, according to the principles of modern education. Suppose a group of students communicates to other students, and the teacher is a director or mentor. In that case, there will be an interactive process with a high level of student activity. The communication processes that may occur during the learning process are:

a. one-way communication,

in this case, the contact in question only occurs from the teacher to the students. Because the above contact only occurs from the teacher to students, this communication model has the following characteristics: (a) The level of student activity is low, (b) as communicators are only teachers, (c) as communicants are students, and (d) if learning occurs by demonstration, the teacher's activities are more likely to be demonstrations.

b. Two-way communication (bidirectional)

These two directions are between teachers and students or between students and teachers. Some of the characteristics of this two-way communication include: (a) student activities have begun to appear, (b) both teachers and students can act as communicators, and (c) if learning occurs by demonstration, the teacher's activities will be more varied in using methods.

c. Multidirectional (multidirectional) communication

namely between teachers and students, students and students, or between students and teachers. Some characteristics of multidirectional communication include: (a) high levels of student activity, (b) teachers and students can be communicators, (c) learning will occur more variedly, (d) demonstration function is not only demonstration but will

also be experimental for students. The students. Usually, in learning, there are many obstacles in connection with communication. In this study, after exploring the factors causing it, maybe one of them occurs in communication errors, namely:

1) Teachers, as communicators, are less able to convey it.
2) There are differences in the students' grasping power as communicants.
3) There are differences in space and time between teachers as communicators and students as communicants.
4) The number of students as communicants is vast, making it difficult for teachers to individually reach them as communicators.
5) Effective communication also depends a lot on the activeness of the recipient. The recipient may react (hold feedback) in the form of questions, answers to questions, or actions, both mentally and physically. The existence of this feedback allows the communicator to make improvements to the way of communication that has been done. To avoid or reduce the possibility of miscommunication, it is necessary to use a target that can help the communication process, namely, the media. In learning, the media used is called learning media because the media is a supporting element in the communication process. The type, form, and function of this media are primarily determined by the style, state, and purpose of the communication itself. The steps for developing interactive learning media in compiling learning media.

4. Determining the Type of Interactive Learning Media

Pay close attention; we will make whether our tools are to teach (presentations) to students or we direct them to be taken home by students or for independent study at home or school. There are two types of learning multimedia according to its use:

a. Multimedia Learning Presentation:

A tool for educators in the learning process in the classroom and does not replace educators as a whole. In the form of pointers to the material presented (explicit knowledge) and can be added with linear multimedia in the form of films and videos to strengthen students' understanding. Can be developed with presentation software such as OpenOffice Impress, Microsoft PowerPoint, etc.

b. Self-Learning Multimedia

Learning software can be used by students independently or without the help of educators. Self-learning multimedia must be able to combine explicit knowledge (written knowledge in books, articles, etc.) and tacit knowledge (know-how, rule of thumb, educator experience). Of course, because it replaces educators, there must be an assessment feature for exercises, exams, and simulations, including problem-solving stages. You can use software such as Macromedia Authorware, Macromedia director, or Adobe Flash for complex levels. We can also use easy software such as OpenOffice Impress or Microsoft PowerPoint, as long as we want to be observant and smart in using various animation effects and features in both software.

5. Determine The Theme Of Teaching Materials

Take the theme of teaching materials that we think are very helpful in increasing students' understanding and interest if we use multimedia. Remember that our main goal in creating learning multimedia is to improve students' performance. Don't get caught up in transferring books to digital media because this makes it difficult for students. When a biology educator wants to describe a type of plant so that students can understand it, and it turns out to be challenging to do (because educators can't draw on a computer, etc.), then don't do it. It would be better if the tree was brought directly to the front of the class. This is an example of how learning media does not have to be with information technology. In educator certification, learning media such as trees, dried cockroaches, etc., still gets significant scoring points.

a. Collecting A Media Overview

In this stage, detailed specifications are made regarding the media architecture, style, and material requirements for manufacturing media. The specifications are detailed so that at the next step, namely when collecting and installing materials, no new decisions are needed but use what has been determined at the design stage. You must be able to squeeze the ability and ideas to make flowcharts and storyboards because that way, you can show images in a scene from the storyline that you will compose. Ideally, the flowcharts and storyboards you write should be understandable by the people you will team up with in creating interactive learning media projects (you won't be working alone, will you??)

b. Collect Flow Chart (Flowchart)

Flowcharts will help you compile media; flowcharts will provide a complete picture of the flow from one scene (view) to another. To create a flowchart, you can use the rules for constructing a flowchart or use your own version. What needs to be considered in compiling a flow chart is, of course, that the diagram is informative and doesn't confuse you when you start collecting media (see example in handout-2: example of media design)

c. Complete Storyboard (Storyboard)

Arrange a storyline or storyboard that gives an idea of what the teaching material will be like. Don't think that storyboarding is a tricky thing; even just pointing out that as long as it can provide an excellent design for how the material is taught is more than enough. The way to make it is also enough with word processing software or spreadsheets that we control; no need to be grandiose using a professional storyboard maker application. The following is an example of an interactive learning media storyboard for a simple storyboard.

d. Collection Of Materials

The collection of materials or materials can be done in parallel with the media assembly stage (assembly). At this stage, the collection of materials such as clip art images, animations, audio, photos, videos, and so on is carried out. At this stage, you usually must also carry out some treatment or processing of raw materials or materials. Of course, supporting software is needed for processing raw materials. You can use Macromedia firework, photoshop, or CorelDraw to process graphic materials, use adobe audition or cool edit if you want to process audio, adobe premiere or pinnacle if you're going to process video, Macromedia flash or swish MX if you wish to process animation. The software options above depend on your taste and familiarity with the software.

e. Set Target

Keep the learning process serious by setting personal targets, for example, participating in competitions, winning awards, preparing products for sale, or scheduling program/project deadlines. The target is necessary so that the learning process makes learning multimedia maintained and can run continuously, aka not breaking up in the middle of the road. For competitions and awards, at least in Indonesia, there are various national events that we can target. Multimedia development centers and national education offices in multiple regions are starting to bloom in organizing competitions in the local multimedia field.

6. Learning Media in the Digital Age

Currently, when the learning process is carried out remotely, the popular media used are interactive multimedia such as learning videos, digital games, digital books, power points, and others.

To develop and prepare good learning multimedia, of course, in addition to required skills, also requires applications and software that function

as tools to build these learning media. Here is a list of applications and software you can try to develop for learning multimedia, especially digital-based ones.

a. Canva

Canva is one of the most popular graphics or visual processing applications today. Canva is a cloud-based graphics processing application, so you must be connected to the internet if you want to use it. As an educator, you can use Canva for your learning media visual design needs, such as creating infographics, material summaries, worksheets, brochures, posters, presentation templates, YouTube thumbnails, and other simple graphic needs. Creating visual designs in Canva is also easier because each design type is grouped according to its own category. There are at least seven categories: social media, documents, personal, education, marketing, events, and advertising. You can directly use this application through the canva.com website or the mobile application available on the Playstore and Apple Store. Remember, you need to create an account before using this app.

Pros: 1). simple interface; 2). Has thousands of templates; 3). It does not need to be installed on the computer; 4). Saves storage space usage; 5). It can be used via smartphones.

Weaknesses: 1). Cannot be accessed without an internet connection; 2). Unable to export source file; 3). Cannot export files with transparent backgrounds (premium feature); 4). Cannot export GIF and video files (premium feature).

b. Powtoon

Powtoon is an interactive animation video and presentation application. You can use this application for learning media needs, such as presentations, animated videos, moving infographics, etc. Using Powtoon, your explanation of material concepts can be more apparent and overcome the limitations of space, time, and senses. Powtoon has a variety of features and templates that will help facilitate the process of making learning media. You can add characters, text

effects, animations, links, backgrounds, and more. You can also move symbols and text simultaneously by selecting the available products and poses.

After editing, you can immediately publish it to YouTube, Facebook and others. You can also save or export in other formats, such as MP4, PDF, and PPT. You can use Powtoon directly from the powtoon.com web or its mobile app.

Pros: 1). Can make learning more exciting and interactive; 2). Its practical use; 3). Has interesting characters and animations; 4). Stimulates various senses (sight and hearing); 4). Can be used in large groups and collaboratively; 5). Can provide feedback.

Weaknesses: 1). Too short duration; 2). The manufacturing process must be connected to the internet; 3). Cannot be given background music; 4). Requires more creativity so that the results are more attractive.

c. Prezi

Prezi is an application (software) for creating and managing presentations online. Prezi has similarities to PowerPoint and Google Slides applications. One of Prezi's main features is using the Zooming User Interface (ZUI), which allows you to zoom in and out of presentation media flexibly and dynamically. You also have the option to create presentations in linear mode. The linear method has a sequential slide characteristic.

Prezi can be used online as well as offline. You can directly visit prezi.com, while for offline access, you need to install the master first. Prezi's main features include Prezi Present (for presentations), Prezi Video (for interactive videos), and Prezi Design (for design). By using Prezi, it is hoped that it can make your online kbm more exciting and interactive.

Pros: 1). Display themes and templates that are more varied than PPT; 2). More interesting and interactive because it uses ZUI

technology; 3). Easier to create animations; 4). The quality of learning is better and more systematic.

Weaknesses: 1). It looks monotonous because it only uses ZUI technology; 2). Installation and use of the application require an internet connection; 3). Difficult to enter math symbols.

d. Sparkol Video Scribe

It is a whiteboard video presentation software using handwritten animation with a whiteboard-like background. Sparkol can become an interactive learning media development tool because it has an attractive combination of energies and templates. You can use this software online via video scribe. Co or offline. For unrestricted use, you are given a trial period of 30 days; after that, you must use the paid version. Many animation assets, images, icons, and effects can help enhance and clarify your information.

Pros: 1). Has a variety of image and animation assets; 2). Simple interface; 3). Include music and voice-over as a background from sparkol or theme of your choice; 4). It can be exported in mp4 and wave formats and directly published on social media.

Weaknesses: 1). To get access and full features, you need a subscription; 2). It requires good computer/laptop specifications so that it is not slow and has problems when editing.

e. Lectora

Is a software and e-learning development tool. The lecture can be used for various learning needs, especially for making presentations, quizzes, and even flash-based learning games. You can easily insert videos, pictures, games, evaluation questions, test sheets, and more. When installing Lectora, it is accompanied by supporting applications such as Camtasia (screen recording), flypaper (combining images and animations), and Snagit (monitor print/capture). By using Lectora, you can make e-learning media enjoyable. You can create presentation

materials, add sample practice questions, insert pictures and videos, and more.

Pros: 1). Easy to use by anyone 2). Multifunctional, which can be used to create websites, E-Learning content, quizzes, etc.; 3). Provides an extensive library of templates, clipart, and effects; 4). Can be published in various image, audio, and video formats; 5). A unique feature for making flash-based games is accompanied by an evaluation feature.

Weaknesses: 1). Requires pretty good computer/laptop specifications; 2). Supporting media is quite expensive; 3). The effectiveness of media use depends on the material and the presenter.

f. Sigil

Is an application used to create and manage digital books (eBooks). This application is not only free but also has full features. You can develop an exciting eBook, so students are more motivated to read. Sigil is one of the most widely used Epub (electronic publications) because it is easy to use. Sigil also supports various formats such as text, audio, and video images that can be embedded in digital books to make them more interactive. The supported formats, such as Epub, HTML, and others, are also complete.

You can include materials, quizzes, videos, audio, practice questions for elementary school and above, and other content in your digital book to make it more interesting. Sigil can be accessed via desktop applications, browsers, and mobile devices. You can open the eBook output through various digital book reader applications.

Pros: 1). Supports various formats; 2). Output can be read on multiple platforms (mobile and desktop); 3). Open Source;4). Easy to use and can change the look working screen; 5). Has translation facilities; 6). Easy, inexpensive, and portable publication.

Weaknesses: 1). There are still frequent bugs and problems with the application; 2). Quickly disseminated so that it is vulnerable to copyright abuse; 3). Need adequate gadget support.

g. Wondershare Filmora

It is a video editing application that is easy for beginners but has complete features. You can use this application to edit your learning video media to make it more interesting. Filmora has a variety of cool and attractive templates, animation effects, and transitions that you can use for free. Filmora's interface is also simple making it easy to use. Video output in Filmora also supports various formats. Filmora is available for both free and paid versions. You can access and download this application via filmora.wondershare.com.

Pros: 1). It has a simple interface and is easy to use; 2). Light and not easy to crash; 3). Lots of free features, templates, and plugins; 4). Support many video output formats; 5). Complete video tutorials available; 6). A mobile version is available under the name Filmora Go.

Weaknesses: 1). Paid if you want to get full features; 2). Less flexibility and customization than premiere pro; 3). Requires good PC/Laptop specifications; 4). Templates, effects, plugins, transitions, and more need to be downloaded again.

h. Quizizz

Quizizz is a student engagement platform that allows teachers to conduct interactive lessons and quizzes with their students. The created interactive quiz has up to 5 answer options, including the correct answer, and an image can be added to the background of the question. Quizizz can provide data and statistics about student performance results directly. Quizizz can not only be done when learning in class but also can be made questions for homework (PR) so that it can be played anytime and anywhere by students as long as it does not exceed the predetermined time limit. This certainly makes it easier for teachers

to give students assignments such as exercises or tests while continuing to monitor online and avoid cheating. Advantages:

1) Ease of Making Questions

   This means that the teacher only needs to move the questions made in archive form into the Quizizz application.

2) Point and Ranking System

   This means that when students answer questions correctly, the points earned will appear, and at the end of the quiz, each quiz participant will rank. This can make the examination more exciting and challenging.

3) Correct Answer Options

   When students answer a question incorrectly, the correct answer will appear.

4) Work Stats

   This means that when students finish the quiz, the overall statistics of working on the questions will appear, including the percentage of true falsehood, speed of answering, and others. In addition, students can also review the answers to the quizzes that have been done.

5) Interesting Features

   When taking quizzes using quizzes, students will have the opportunity to choose several skills, each of which has its own advantages. One of them has the chance to get 2x the points.

6) Deficiency

   a) Students can open a new tab, meaning that students can log in with another account if they have two email accounts,

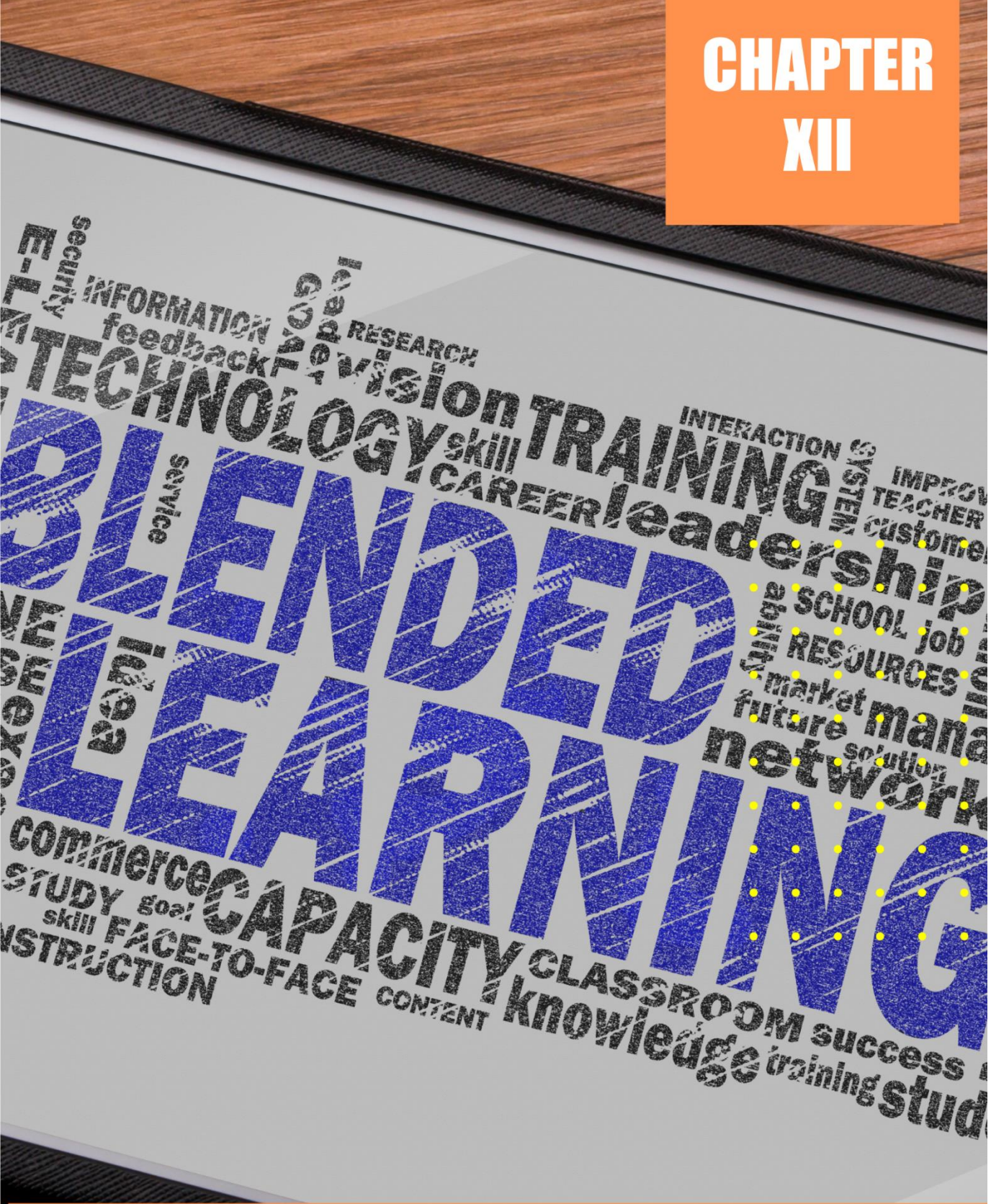
   b) Students may get a warning even though they have done/answered all the questions asked, this is due to "time problems", it means that the speed of students working on the questions will get a significant value so that it affects,

c) It will be an obstacle if there are some students who are late to join.

D. Enrichment

1. Explain The Definition of Interactive Media !
2. What Is The Goals of Creating Learning Media ?
3. Mention Five Interactive Media!

CHAPTER XII



BLENDED MEDIA DEVELOPMENT / HYBRID LEARNING

A. Introduction

This chapter will explain the development of Blended Learning or hybrid learning media. The main topics that will be discussed are the characteristics of blended learning, the purpose of blended learning, the application of blended / hybrid learning, Blended Learning procedures in education, and tutorial concepts. In today's all-digital era, understanding the development of blended/hybrid learning media is essential.

B. Learning Objectives

After attending this lecture, students are expected to be able to explain what are the characteristics of blended learning, the purpose of blended learning, how to apply blended / hybrid learning, how the Blended Learning procedure is learning, and how the concept of tutorials from the development of blended media/hybrid learning. Content development in interactive media-based learning media is based on the values of moderation, such as tolerance, anti-violence, deliberation, citizenship/love for the homeland, and pioneering.

C. Materials

Blended Learning is an English term, consisting of two syllables, blended and learning. Blended is a blend of good communication. While learning is learning.Blended instruction, sometimes called hybrid instruction, is mixing and matching various instructional settings to meet your student's learning needs".

According to Harding, Kaczynski, and Wood, 2005, Blended Learning is a learning approach that integrates traditional face-to-face learning and distance learning that uses online learning resources and a variety of communication options that can be used by teachers and learners. Implementing this learning allows online learning resources, especially web-based ones, without leaving face-to-face activities. With the implementation of blended learning, learning takes place more meaningfully because of the diversity of learning resources that may be obtained.

According to Thorne 2003, Blended Learning is a blend of multimedia technology, CD ROM video streaming, virtual classes, voice mail, e-mail and teleconference, online text animation, and video streaming. In blended learning, all of them are combined in learning activities. Therefore, Blended Learning is the

right solution and can be tailored to the needs of learners. As Smaldino told the learners.

In learning activities, Blended Learning has the potential to create experiences for learners. Because Blended Learning helps represent a clear advantage to create a safe learning experience. From experience gained, the learner can provide knowledge, skills, and competencies for the learner himself. Regardless of distance and time, Blended Learning can be one way to determine expected goals.

The term Blended learning, according to MacDonald 2008 is usually associated with including online media in learning, while at the same time, it can also be done face-to-face learning in a conventional way. This method is done to support the learner's understanding of the learning objectives, for example, by combining technology as a learning medium and as a learning resource. As a learning medium, it will carry out synchronous learning, such as using text and audio in the learning process. And as a learning resource by doing asynchronous learning such as e-mail, discussion forums, and web learning. Then Bersin explained that Blended Learning is a combination of various learning media to create an optimal learning program. Such as technology, activities, and multiple types of events.

So it can be concluded that blending means face-to-face learning supported by electronic formats. Then Blended Learning can be applied to achieve the desired goal. Blended Learning can also be interpreted as a learning process that utilizes a variety of approaches, media, methods, and techniques. In simple terms, it can be said that Blended Learning is learning that combines and mixes, whether it is face-to-face, self-study, and online self-study, or integrating methods and media to achieve learning goals.

1. **Characteristics of Blended learning**

   The characteristics of Blended Learning are:

   a. Learning that combines different ways of delivery, teaching models, learning styles, and a variety of diverse technology-based media

b. As a combination of face-to-face teaching, self-study, and self-study online.
c. Learning is supported by an effective combination of delivery, education, and learning styles.
d. Teachers and parents of learners have an equally important role, teachers as facilitators and parents as supporters.

According to Tsharpen et.al characteristics of Blended Learning are168:

a. Provision of supplementary sources for learning programs that relate to traditional lines for the most part, through institutional support of virtual learning environments
b. Transformative level of learning practice is carried out by the design of learning to depth
c. A holistic view of technology to support learning.

Blended Learning contains face-to-face, which intersects with Blended Learning. In Blended Learning, there is computer-based learning related to online learning. In online learning, internet-based learning which there is web-based learning. The description concluded that in Blended Learning, there is a face-to-face that is sliced with Blended Learning where Blended Learning and its components are computer-based, and online learning is internet web-based for learning.

Based on the components in Blended Learning, the learning theory that underlies the learning model is the theory of learning constructivism (individual learning) from Piaget, cognitive from Bruner Gagne and Bloom in a social learning environment, or Social Constructivist (collaborative learning) from Vygotsky. Characterizable theory of learning constructivism (individual learning) for Blended Learning is as follows:

a. Active Learners
b. Learners construct their knowledge
c. Subjective, dynamic, and expanding
d. Processing and understanding of information
e. The learner has his own learning.

Individual learning in this theory, learners are active participants if they can build their own knowledge subjectively, dynamically, and develop. Then process and understand the information so the learner has his own learning. Learners develop their wisdom based on knowledge from experiences they have experienced themselves. Cognitive learning theory is the next learning theory that underlies the Blended Learning model. Precognitive proximity emphasizes the chart as one organized structure of knowledge. Bloom 1956 identified six cognitive learning levels: "knowledge, understanding, application, analysis, and synthesis."

The last theory is the theory of social constructivism developed by Vygotsky. According to Vygotsky 1978, it is as follows: the way learners construct knowledge, think, reason, and reflect on is uniquely shaped by their relationship with others. He argued that the guidance given by more capable others allows the learner to engage in levels of activity that could not be managed alone. Social constructivism is also called collaborative learning. The characteristics of such learning theory are as follows 171:

This theory requires students to build knowledge, think, find excuses, and be reflected in unique forms through relating to others. The learner learns from solving a real problem and joins a knowledge generator. The devotee also enters inside as a learner together with his learners. The form of the task will also be processed, knowledge assessed and created, and then build new knowledge.

2. Purpose of Blended Learning

a. Helping learners to develop better in the learning process, according to learning styles and preferences in learning.
b. Provides practically realistic opportunities for teachers and learners to learn independently, usefully, and continuously develop.
c. Increased scheduling flexibility for learners by combining the best aspects of face-to-face and online instruction. Face-to-face classes can be used to engage learners in interactive experiences. Meanwhile, the

online portion provides learners with multimedia content that is rich in knowledge anytime and anywhere if students have internet access.

3. Application of Blended Learning

Blended Learning is now widely used by open and distance education providers. If, in the past, only Open Universities were allowed to organize distance education, this is with the issuance of the decree of the Minister of National Education No.107 / U / 2001 (July 2, 2001) concerning the implementation of the education program a Distance Higher Education. Certain universities that can organize open and distance education use Blended Learning has also been allowed to host it. Non-formal educational institutions, such as courses, have also taken advantage of this Blended Learning advantage for their programs. Specifically, in teacher education, Blended Learning has the following meanings.

a. Blended Learning delivers information, communication, education, and training on teacher training materials, both the substance of the subject matter and online educational science.
b. Blended Learning provides tools that can enrich the value of conventional learning (conventional learning models, studies including textbooks, CD-ROMs, and computer-based training) to answer the challenges of globalization development.
c. Blended Learning does not mean replacing conventional learning models in the classroom but strengthening those learning models through content enrichment and the development of educational technology.
d. The capacity of teachers varies greatly depending on the content and delivery. The better the alignment between the content and the delivery tool with the learning style, the better the capacity of the students participants, which will give better results.
e. Utilizing electronic technology services. Teachers and learners, learners and fellow learners, or teachers and fellow teachers can

communicate relatively easily without being limited to protocolary things.

f. Utilizing the advantages of computers (digital media and computer networks).
g. Using self-learning materials stored on a computer so that it can be accessed by teachers and students without it and anywhere if the person concerned needs it.
h. Utilizing lesson schedules, curricula, learning progress outcomes, and matters related to educational administration can be viewed at any time on a computer.

The development of Blended Learning reveals that there are three possibilities in the development of an internet-based learning system, namely:

a. Web courses are the use of the internet for educational purposes, where students and teachers are entirely separate, and face-to-face meetings are no need.
b. The web-centric course is the use of the internet that combines distance and face-to-face (conventional) learning.
c. The web-enhanced course model uses the internet to support improving the quality of learning in the classroom.

There are three positive impacts of internet use in education: (1) learners can easily take courses anywhere in the world without the limits of intuition or national borders. (2) learners can quickly learn from experts in the field of interest. (3) lectures/studies can be quickly taken in various parts of the world without relying on the university/school where the student is studying.

4. Blended Learning Procedures in Learning

Improving teacher qualifications is one of the priorities of the Indonesian government. This is a form of realization of the Law on teachers and lecturers no.14/2005, which requires teachers to have a minimum qualification of S1 and have a certificate as a teacher. Currently, there are

2,667,655 teachers in Indonesia and 172 people. In addition to the academic quality of teachers, the condition of improving the educational qualifications of teachers, the state of teacher shortages is also still experienced by some regions in the country at various levels of education. In 2007, in addition to the Open University of the Indonesian government through the Directorate General of Higher Education and the Directorate of Quality Improvement of Education Personnel, 10 LPTK jointly organized a PJJ system for improving teacher qualifications through SI PGSD education.

PJJ in this program is based on information and communication technology using the internet as the primary medium; face-to-face is carried out only a few times in residential programs, and the rest is using e-learning programs. The success of PJJ PGSD and the distance learning system that uses e-learning as the primary tool is very decisive to the developed learning management system (LMS) model. The government, together with the used parties, are still looking for a reliable LMS model that can realize the profile of professional teachers with equal educational and teacher competencies that even exceed teachers with a regular learning system. The Blended Learning model combines several learning approaches, namely conventional learning in face-to-face and internet-based e-learning.

As stated by Gagne 1984 Effective learning has the following criteria: (1) involves learning in the learning process; (2) encourages the emergence of skills for self-study (learn how to learn); (3) improves the knowledge and skills of learners; (4) motivate further learning.

Darmodiharjo (1998:39) suggests that tutors nature carrying out their duties have a role that includes; (1) as a motivator, (2) as a facilitator, (3) as a mentor and evaluator, (4) developing subject matter, (5) manager of the teaching and learning process, (6) an update agent. Meanwhile, Muhammad Zen stated that the duties of the tutor as a teacher include; (1) as an informer, (2) as an organizer, (3) as a motivator, (4) as a director, (5) as an

initiator, (6) as a transmitter, (7) as a facilitator, (8) as a mediator, (9) as an evaluator.173

5. **Concept Tutorial**

Tutorials are a process of providing help and tutoring from someone to others, both individually and in groups. In this concept, tutorials are learning services that allow the learning process to occur with different characteristics, such as lecturers who function as facilitators of learning activities, not as teachers. The types of tutorials are face-to-face tutorials (TTM) and online tutorials.

a. Face-to-Face tutorial

In this program, all courses are given face-to-face tutorial guidance.

b. Tutorial Online

This tutorial is carried out with the help of a computer network. An online tutorial model is a tutorial model that uses a computer network. The material is given in the form of a tutorial script that can be accessed anywhere the student and students in the form of without having to tap face with the tutor. In this model, the tutor must prepare a tutorial script that allows interaction between the tutor and the student. In addition, the active participation of students is also essential because it affects the final value of the tutorial.

6. **Advantages and Disadvantages of Blended Learning**

Advantages:

a. Pros of blended learning:
b. Learning occurs independently and conventionally, both of which have advantages that can complement each other.
c. Learning is more effective and efficient.
d. Improve accessibility. With blended learning, it is easier for students to access learning materials.

Disadvantages of blended learning:

1. The media needed is very diverse, making it challenging to implement if the facilities and infrastructure are not supported.
2. Uneven facilities owned by students, such as computers and internet access. Whereas in Blended learning, adequate internet access is needed; if the network is inadequate, it will make it difficult for participants to follow independent learners online.
3. Lack of public knowledge of the use of technology.
4. Uneven facilities owned by students, such as computers and internet access.

7. Type - Media Type

a. Object-based media

Learning media, which are facilities and infrastructure to support the implementation of learning activities and support education and training, certainly need their own attention. Its existence cannot be simply ignored in the process of education, especially in the learning process. This is because, without learning media, the implementation of education will not run well. The development of this media was initially only considered as a teaching aids tool for teachers (teaching aids). The tools used are visual aids, namely images, models, objects, and other devices that can provide concrete experiences and learning motivation to increase students' absorption and learning outcomes.

However, as the media function becomes very important in the learning process and is adjusted to the characteristics of students, the media function can increase students' interests and abilities, choose the right time, availability of materials in media making, and have good technical quality. Learning media have many types, each of which has its own characteristics. Learning media is everything that can be used to channel the message or content of learning; it can stimulate the mind, feelings, attention, and abilities of students so that it can encourage the learning process.

Media has a massive function in learning activities. Among others are two-dimensional media, three-dimensional and environmental media, and others. Because the media-media serves as an intermediary for conveying or spreading ideas, ideas, or opinions in learning so that what is stated reaches the intended recipient. In this paper, the author will discuss teaching media in the form of two-dimensional media, namely board media.

Two-dimensional media have a specific value to facilitate the presentation of a particular set of metrics, arouse the child's interest, and provide uniformity of information. It can be done repeatedly, reaching all subject areas; the teacher must have skills in learning activities, including the ability to give explanations, both primary and additional explanations. Two-dimensional visual media is projected electronic media and consists of hardware and software. The use of this media requires electricity to be able to move the wearer.

This two-dimensional visual media has several kinds, including overhead projectors, slides, and strip films. Overhead projectors can project on the screen what is depicted or inscribed on a transparent plastic sheet. The teacher can do writings, notes, or drawings on those transparent sheets, just like it can be done on a whiteboard. Overhead projectors can be used without darkening the room (Nasution 1994, 105).

From the above understanding, in general, it can be said that the substance of the two-dimensional media itself is a form of the channel which is used to channel messages, information, or learning materials to the recipient of the message or learner; it can also be said that two-dimensional learning media are various types of components in the learning environment that can stimulate learners to learn.

1) Types of Two-Dimensional Media

Types of Media Two Dimensions The classification of two-dimensional media is divided into 3 parts: Graphic Media, Board Form Media, and Print Media (Kustandi, Cecep, and Sutjipto 2011, 45–48).

a) Graphic media

Graphic media is a visual medium that presents facts and ideas through the presentation of words, sentences, and symbols or images. Graphics are usually used to attract attention, clarify the production of ideas, and illustrate facts so that they draw and are remembered by people. In addition to being simple and easy to make, graphics, including relatively cheap media in terms of cost, has various types, some of which are as follows:

– Sketches

A sketch is a simple drawing or rough draft that depicts the main parts of a gambit shape.

– Images

Images or photos are a learning medium that is often used. This medium is a common language, understandable, and enjoyed by everyone everywhere. Images or photographs serve to convey a message through images that concern the sense of sight. The message conveyed is poured into the symbols of visual communication. These symbols need to be understood correctly in order for the process of delivering messages to be successful and efficient. In addition, graphic media aims to attract attention, clarify the material, and illustrate facts or information that may be quick when illustrated with images. Image media is everything that is visually embodied into a two-dimensional form as an outpouring of thoughts that form various things such as paintings, portraits, and films

(Hamalik, 1994: 95). Likewise, Sadiman's opinion that the medium of images is the most commonly used medium, which is a joint discussion that can be understood and enjoyed everywhere (Sadiman, 1996:29). Theoretically, the use of image media in mathematics learning is undoubtedly an internalization of obtaining direct experience through artificial objects, which is a manifestation of the knowledge of the highest value, as well as an explanatory of abstract concepts of mathematics lessons. In line with the purpose of utilizing image media to simplify the material's complexity, mathematics learning with image media will help students understand the lesson.

The imagination or image of students can be generated by arranging and composing visual elements in the teaching material. In addition to considering in terms of the aspects of image media, we must also pay attention to some of the general principles of agar producing communicative images in learning, including the following:

- Visible means that it is easy to be seen by all educational targets, which will take advantage of the media we create.
- Interesting, meaning interesting, not monotonous, and not dull.
- Simple, meaning simple, short, not excessive.
- Useful, the meaning is that the image displayed must be selected that is really beneficial to the target of the student. Don't air too much writing that's actually less important.
- Accurate; the content must be correct and on target.

- Legitimate, the point is that the visuals displayed must be something legitimate and reasonable. An unusual or illogical image will be considered awkward by the child.
- Structured, meaning that the Gambar must be structured or well-arranged, systematic, and coherent so that the message is easy to understand.
- Use graphs to illustrate the general overview of the material before presenting unit by unit of study for use by students organizing the material.
- Colours should be used realistically(Arisato and Rahadi 2003, 26–27).

b) Board Shape Media

The medium of the board shape consists of a whiteboard, a sticky board, a flannel board, and a magnetic board. The function of the blackboard is to write down the point of the teacher's explanation and write down the summary of the lesson in the form of a chart illustration or a picture.

- A sticky board is a piece of the board whose function is as a place to paste messages and a place to organize a display which is part of the vital activity of a school.
- Flannel board is often referred to as a visual board; there is a board covered with flannel or soft cloth, where pieces of the image or symbols are placed, usually called flannel boards. Flannel boards can be used for any type of lesson, can explain bandages or equations systematically, and can cultivate students for active learning.
- A magnetic board, better known as a whiteboard or magnetic board, is a piece of the board made of a layer of white enamel on a metal plot so that the surface can be attached to light objects with magnetic interaction.

- The magnetic board has a dual function: as a whiteboard and as a sticking board, as a place to project movies or slides. The specialty of this magnetic board is that the trim tool is unique, not exposed to dust, and easier to move around, increasing students' attention and enthusiasm for learning due to brighter writing.

c) Print Media

Print media also includes materials prepared on paper for teaching and information. In addition to textbooks or textbooks, there is also a guide sheet in the form of a checklist of steps to follow when operating equipment or maintaining equipment. This sheet contains an image or photo beside the explanatory text. A learning guide is another form of print media that prepares and directs students on how to progress to the next unit and complete their subjects(Arsyad and Azhar 2003, 37).

Historically, the term print media appeared as the invention of the printer by Johann Gutenberg in 1456. Then in the field of printing, developed printer products that are increasingly modern and effective in their use. The print media are:

- Textbooks

  A textbook is a presentation in the form of a printed board logically and systematically about a particular branch of science or field. The benefits of books are as individual lesson tools, a teacher's guide in teaching, a tool to encourage students to choose appropriate learning techniques, and a means to improve teachers' skills in organizing lesson materials.

- Newspapers and Magazines

  Newspapers and magazines are mass communication media in print; which has no doubt about their role and influence on the reading public. Regarding content,

newspapers and magazines can be divided into general newspapers and magazines and school newspapers and magazines. There is a function of containing warm and actual reading materials, containing the latest data on matters that attract attention, as a means of learning to write articles, having clipping materials that can be used as display materials for sticky boards, enriching the treasury of knowledge, improving critical reading skills and discussion skills.

- Encyclopaedia

  An encyclopaedia or an extensive dictionary containing various latest scientific details will be a reasonably necessary learning resource for learners. The encyclopaedia is a supporting reading source. The teacher's task is to provide appropriate motivation and guidance to the learners so that the students use the encyclopaedia as a supportive reading for the lesson.

- Supplement Books

  Supplement books can serve as enrichment materials for children, whether related to lessons or not; supplement books can add provisions to children to strengthen aspects of their personality. What includes supplement books are works of fiction and non-fiction. Supplement books can provide opportunities for children to meet their individual interests. Supplementing books in smaller formats and attracting learners will add a new treasury of knowledge, skills, and attitudes sufficient to support personality stability.

2) Advantages and disadvantages of object-based media

Advantages of object-based media

a) Allows students to learn details
b) Does not require special equipment to use it
c) Useful in any space without the need for special adjustments.
d) Users can flexibly make changes while the presentation progresses.
e) Easy to prepare, and the material is easy to dig.

Disadvantages of object-based media

1) Not suitable for large group study.
2) Difficulty displaying motion
3) The media printing process often takes several days to months

b. Audio-visual based media

1) Definition and Types of audio-visual media

Audio Visual media is a set of media that simultaneously displays images and sounds, containing learning messages. This learning media has more than one component so that it is an integration of several elements so that it can display sounds and moving images simultaneously has been planned carefully, systematically, and logically by the objectives and level of readiness of the students who receive it:

a) YouTube
b) Television
c) Film

2) Technical Guidelines for Developing Audio Visual Media

Here are practical pointers to consider when considering producing moving images, both film, and television:

a) This medium is designed primarily to show motion, not display still images.

b) If worked out well, moving images are excellent for affective purposes (influencing students to change attitudes).

c) For teaching purposes, motion images should be used based on a direct relationship with the viewer's personality. No matter how large the group of students watching, the message described in the script should count the student as a person.

d) The sound that accompanies the image must match the content of the picture.

e) Narration should not tell what is seen on the screen unless it is to interpret or clarify, or emphasize what is essential.

f) All moving image media must contain standardized content and be edited and tested before being used in teaching activities. Before printing, consult the material with a person who is an expert in that field. You also need to try the steadiness of this medium on a group of students.

g) Since films and videos are all moving image media, the narrative should be developed based on carefully designed visual scripts. The playwright must think visually (think in the imaging system)

h) Remember, your audience is unattached. They could have turned their attention to other things if the spectacle hadn't appealed to him. Therefore, in the planning of this media script, it must also consider the audience's attitudes, cultural background, age, gender, as well as their ideas, and expectations.

i) Chamber g presented should be varied and taken from different angles so that the audience does not get bored quickly. Try to keep the length of the turnaround period to a minimum.

j) Producing moving image media is a complicated task. This activity involves many experts from various disciplines as

well as skilled technicians. The work system regulated by a committee is unsuitable for this production activity; in fact, it will only add to the cost of frustration and confusion. The responsibility of handling work at various levels of production, and the responsibility for the approval of the final result, must constantly be in the hands of one person. So whoever the person is, he must be appointed as a producer and always be ready to coordinate the work of the group involved in the production. The above provisions are not an absolute requirement or a necessity for any business to produce mobile media. It may be that the condition does not apply in every case, or not all of the provisions apply to a point. This description is not intended to further sharpen the conflict between film and video as a competing medium in attracting its fans. The following guidelines and list of questions posed are designed to give the reader an organized knowledge base of things to do in the preproduction stages of moving image media.

3) Advantages and Disadvantages of Audio Visual

   Advantages of Audio Visual

   a) We can re-show specific movements using video (accompanied by sound or not). The motion shown can be either a harmonious stimulus or in the form of an expected student response. For example, a short program (vignette) offers people's interaction. By looking at this program, students can see what "should or should not" be done.

   b) With videos, students' performances can be immediately viewed again for criticism or evaluation. The trick is to record selected activities, such as developing interpersonal skills, such as interviewing techniques, leading hearings, giving lectures, and so on. This is intended to solidify the

student's mastery of a skill before plunging into the actual arena.

c) Using specific effects can be strengthened both the learning process and the entertainment value of the presentation. Some types of visible results that can be obtained with video include shortening/extending time, an overview of several events that are simultaneous "split /multiple screen images" (on the screen, two or more events are visible), a gentle shift from one image/act to the next image/act, and motion explanations (slowed down or accelerated).

d) You'll get the entire content and arrangement of the subject matter/exercise, which can be used interactively with workbooks, instruction manuals,'-textbooks, tools, or other objects that are usually for in the field.

e) Information that can be presented simultaneously at the same time in different locations (classes), and with an unlimited number of spectators or participants, by placing monitors (television sets) in the classroom of the course.

f) An independent learning activity where students learn according to their respective speeds can be designed. This self-contained design of activities is usually equipped or combined with the help of a computer or printed material.

Audio Visual Flaws

a) When it is to be used, the video equipment must be available at the place of use; and must match its size and format with the pica video to be used.

b) Drafting a script or video screenplay is not an easy and time-consuming job.

c) The cost of video production is relatively high, so not a few are reluctant to produce videos

d) it takes skill to produce audio-visuals.

c. Interactive Media

Interactive learning media can be repeated. However, some media are often played once by the audience or learners because they feel that such is enough. For the media to have a high repetition value (in the sense that the audience does not get bored quickly), it is necessary to add creativity in delivering diverse materials and visualizations. With the existence of multimedia or interactive learning media, interactivity can be characterized. The level of interactivity will determine how often the learners are involved in running the program. The involvement of students in learning is expected to increase student learning motivation. Multimedia interactive learning is a learning program that contains a combination of text, images, graphics, sound, video, animation, and simulation in an integrated and synergistic manner with the help of computer devices or the like to achieve the specific learning objectives where users can actively interact with the program.

Interactiveness in interactive multimedia is the flexibility of the user (operator/user) in controlling the media and the ability of the media to respond to inputs provided by the user. Inter-activities in interactive multimedia are divided into 2, namely mental interactivity and physical interactivity. Cognitive interactivity is when the user tries to understand the material by capturing the information displayed, processing it, and storing it in the brain. While physical interactivity in interactive multimedia is the involvement of physical activities from users to provide interaction with the media. Physical interactivity varies from the simplest to the most complex. Simple interactivity, such as pressing the keyboard or clicking a button with the mouse or touching the screen to move pages or entering answers from an exercise given by the application. Complex interactivity is, for example, an activity in a simple simulation where the user can change

a particular variable or in a complex simulation or interaction where the user moves a virtual object.

From the explanation above, it can be concluded that interactive learning media is everything, both hardware, such as books, modules, learning aids in the classroom or in the laboratory, or software (software) containing a combination of text, images, graphics, sound, video, animation, simulation in an integrated and synergistic manner such as the help of computer programs to collect data that can generate data that can condition learners to interact actively and independently of a set of learning to achieve specific learning objectives.

The faster the current of globalization gave rise to other drafts in technological developments. Finally, the Quizizz application was born as a learning medium, supporting the continuity of teaching and learning activities amid a pandemic. The Quizizz application is online, which means it can be used easily if it is supported by internet access. Development of Quizizz learning media needs to be carried out on an ongoing basis so that Quizizz can become a competitive application as a learning medium during adapting to the Covid-19 pandemic. The use of learning media itself cannot be simply released with learning patterns. Organized learning patterns are then determined based on the limitations of educational technology. Basically, there are 4 learning patterns applied in Indonesia,

1) The Traditional pattern, i.e., the relationship of the teacher to the student directly,
2) Teacher pattern with media,
3) Media learning patterns,
4) Pattern of learning with media only. The use of the Quizizz application as a learning medium is included in the category of the number of learning patterns be
5) Where to put the media as a component of the learning system to be on par with other features.

The learning patterns created and empowered through the Quizizz app are interactive multimedia patterns. The Quizizz application has advantages that can be efficiently utilized in addition to learning media, as well as learning evaluation materials; for example, there are data and statistical calculations of student performance, the results of which can illustrate the extent of students' understanding of the material, later becoming a measuring material for overall learning evaluation. Thus, it gives a new color to the teacher's evaluation process and fun learning patterns for students.

Various other features are not too heavy in thinking about answers because the Quizizz application has a fresh look and is rich in fun things. A game will not be separated from the elements of creativity, innovation, adventure, and fun, which can foster a positive motivation of desire to learn from each student. Thus, it can realize the ideals and goals of education in a concrete and even manner. Using Quizizz is very easy. This interactive quiz has up to 4- 5 answer choices, including correct answers. You can also add an image to the question background and adjust the question settings to your liking. When the quiz is finished, it can be shared with students using the generated 6-digit code. Quizizz can be a good and fun learning strategy without losing the essence of ongoing learning. Even this strategy can involve active student participation from the start (Noor, 2020)

d. Banded/ Hybrid Learning

Blended Learning is a method that applies two approaches at once. This method uses face-to-face learning (video conferencing) with an online system. Educators and learners can interact with each other while being a long distance. Yane Hendarrita explained that the Blended Learning method is one of the methods that are considered adequate for improving students' cognitive abilities during a pandemic, especially in the red zone (sibatik kemendikbud.go.id) area. The Blended Learning method was designed and applied in the early 21st

century. Along with the outbreak of the Covid-19 attack, this method is considered the safest and can be used as one of the secure learning methods applied in Indonesia, considering the pandemic outbreak, which does not know for sure when it will end.

In learning activities, Blended Learning can potentially create learners' experiences. Because Blended Learning helps represent a clear advantage to make that learning experience. From experience gained, the learner can provide knowledge, skills, and competencies for the learner himself. Regardless of distance and time, Blended Learning can be one way to achieve the expected goals.

The term blended learning, according to MacDonald 2008 is usually associated with including online media in education. At the same time, face-to-face learning can also be done conventionally. This method is done to support the learner's understanding of the purpose of learning, for example, by combining technology as a learning medium and as a learning resource. As a learning medium, it will carry out synchronous learning, such as usedusing text and audio in the learning process. And as a learning resource by doing asynchronous learning such as e-mail, discussion forums, and the learning web. Then Bersin explained that Blended Learning combines various learning media to create an optimal learning program. Such as technology, activities, and multiple types of events.

So it can be concluded that blending means face-to-face learning supported by electronic formats. Then Blended Learning can be applied to achieve the desired goal. Blended Learning can also be interpreted as a learning process that utilizes a variety of approaches, media, methods, and techniques. In general, it can be said that Blended Learning is learning that combines and mixes both face-to-face self-study and online self-study or mixes methods and media to achieve learning goals.

1) Karakteristik Blended Learning

The characteristics of Blended Learning are:

a) Learning that combines different ways of delivery, teaching models, learning styles, and a variety of diverse technology-based media
b) As a combination of face-to-face, self-study, and online self-study.
c) Learning that is supported by an effective combination of ways of delivery, methods of teaching, and learning styles.
d) Teachers and parents of learners have an equally important role, teachers as facilitators and parents as supporters.

Blended Learning contains face-to-face, which intersects with blended e-learning. In blended e-learning, there is computer-based learning related to online learning. In online education, internet-based learning which there is web-based learning. The description concluded that in Blended Blended e-Learning, there is a face tap that intersects with Blended Learning where Blended Learning and its components are computer-based and internet web-based online learning for learning. Based on the details in Blended Blended e-Learning, the learning theory that underlies the learning model is the theory of learning constructivism (individual learning) from Piaget, cognitive from Bruner Gagne and Bloom in a social learning environment or Social Constructivist (collaborative learning) dari Vygotsky.

The characteristics of constructivism learning theory (individual learning) for Blended Learning are as follows:

a) Active Learners
b) Learners construct their knowledge
c) Subjective, dynamic, and expanding
d) Processing and understanding of information
e) A learner has his own learning.

Individual learning in this theory, learners are active participants if they can build their own knowledge subjectively, dynamically, and develop. Then process and memorize information so that the learner has his own learning. Learners build their wisdom based on knowledge from experiences they have experienced themselves. The following learning theory underlies the Blended Learning model is a cognitive learning theory. The cognitive approach emphasizes the chart as one organized structure of knowledge. Bloom 1956 identified six cognitive learning levels: "knowledge, understanding, application, analysis, and synthesis."

The last is the theory of learning social constructivism developed by Vygotsky. According to Vygotsky 1978, it is as follows: the way learners construct knowledge, think, reason, and reflect on is uniquely shaped by their relationship with others. He argued that the guidance given by more capable others allows the learner to engage in levels of activity that could not be managed alone. Social constructivism is also called collaborative learning. The characteristics of such a theory of learning are as follows:

This theory makes learners build knowledge, think, find excuses, and be reflected in unique forms through relating to others. The learner learns from solving a real problem and joins akit-knowledge disposer. Teachers also go inside as learners together with their learners. The form of the task will also be processed, knowledge assessed and created, and then build new knowledge.

2) Purpose of Blended Learning

   a) Helping learners to develop better in the learning process, according to learning styles and preferences in learning.

b) Provides practically realistic opportunities for teachers and learners to learn independently, usefully, and continuously evolving.

c) Increased flexibility for learners by combining the best aspects of face-to-face and online instruction. Face-to-face classes can be used to engage learners in interactive experiences. While the online portion provides learners with multimedia content that is rich in knowledge at anytime and anywhere if students have internet access.

D. Enrichment

1. What is blended learning?
2. What are the characteristics of blended learning?
3. What is the purpose of blended learning?
4. How is Blended Learning applied in learning?

CHAPTER XIII

MEDIA SIMULATION IN LEARNING

A. Introduction

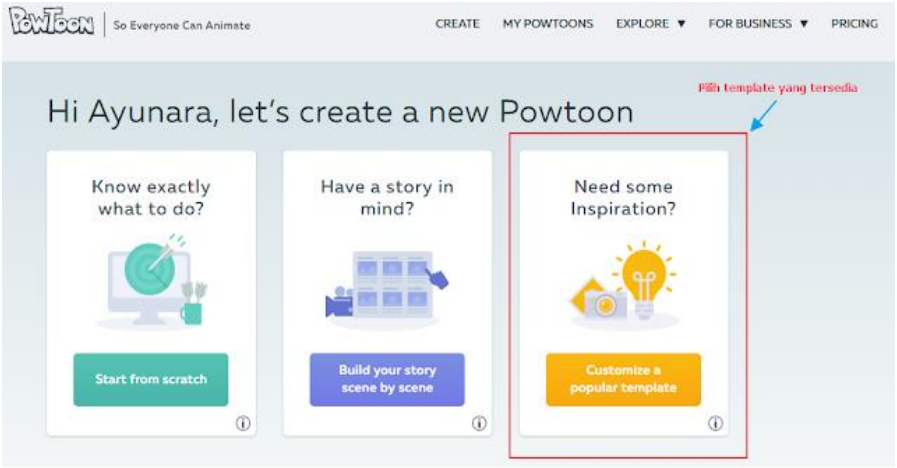
This chapter presents simulations of the use of object-based media and simulations of the use of audio-visual-based media, simulations of the use of interactive media, and simulations of the use of blended/ hybrid learning media. Each simulation will explain the steps to use the media in detail.

B. Purpose

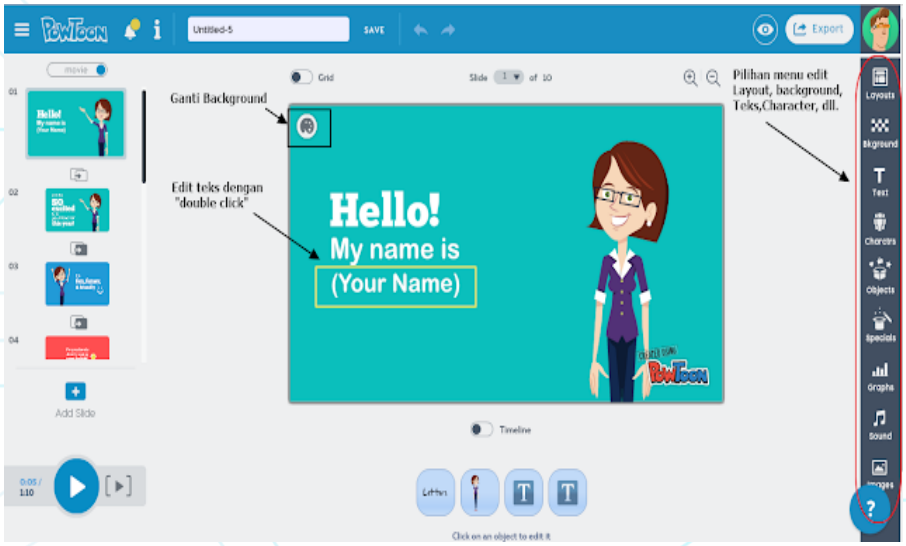
After attending this lecture, students can use object-based, audio-visual, interactive, and blended / hybrid learning media appropriately.

C. Material

1. Simulation of the use of audio-visual-based media
   a) Open the website **at https://www.powtoon.com**, then **sign up** first for those who do not have an account. Better use your Google account as an account for registration because it is related to the last stage. On the following Powtoon page, please select the form of animation offered by Powtoon. As a beginner, we can choose the third option through templates that are already finished or available. We need to edit the template according to our needs. There are two versions of Powtoon, namely free and paid. For paid ones, we can choose templates, animations, and characters that are "pro" in nature. However, do not be afraid; the free version's templates are also attractive.

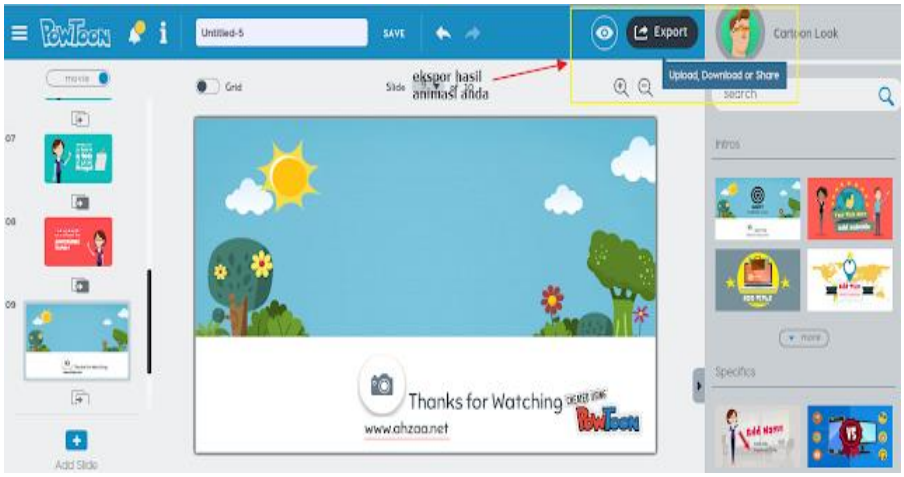


b) Select the available template categories. I chose the template category according to the context I wanted, which is the first introduction when teaching with the "Teacher Introduction" template. Click "use" to edit this template and or click "preview" to see what the resulting animation will look like. In this stage, I select "use" to use it immediately. Here's what it looks like.

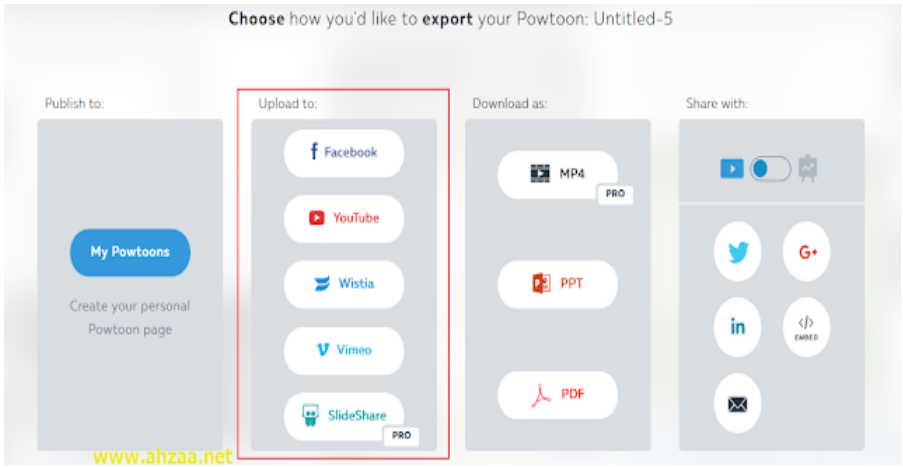


c) Edit the video slides on your template according to your needs.

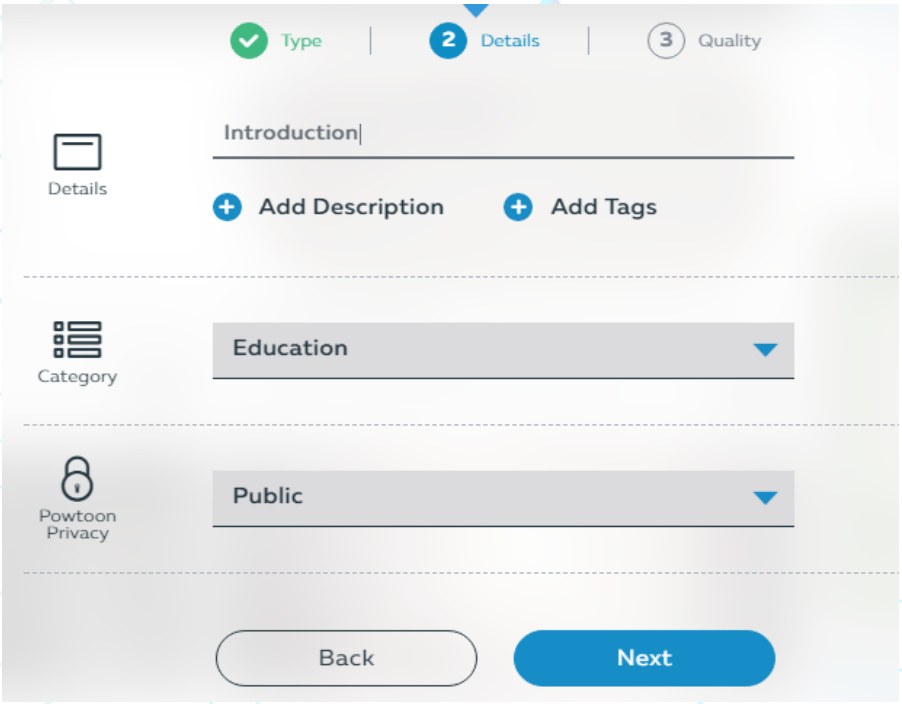
d) When finished, click export to upload, download and share the results of creating your video animation.



e) There are four options after you click 'click' export, publish, Upload, download, and share. For the paid version (pro), you can immediately download your animation results through MP4 format, but if you still use the free one, the trick is to upload it first via YouTube, of course, through your account (YouTube channel). Then download your animation through the YouTube video. (How to download via YouTube can browse through Google)



f) To upload to YouTube, you must first have a Google account. Select Upload, specify the Google Account to use and click next. On the details page, fill in the description and category of your video and click next.



g) On the quality page, select the recommended resolution; for the free version, you can only choose standard quality. When you have, click Upload

2. Interactive media simulation (Quizizz)

How to Create an Account and Operate the Quizizz Application The learning media of the Quizizz application is complicated to create, namely by preparing the material in the form of questions and alternative answers in the Quizizz application. After compiling the material into questions with all other content to be inserted, ten opens and enters the Quizizz application through the web, which is www.Quizizz.com. Asma is available on the play store or other internet pages. Newcomers who do not yet have an account to operate the Quizizz application are required to register first and get a bill to

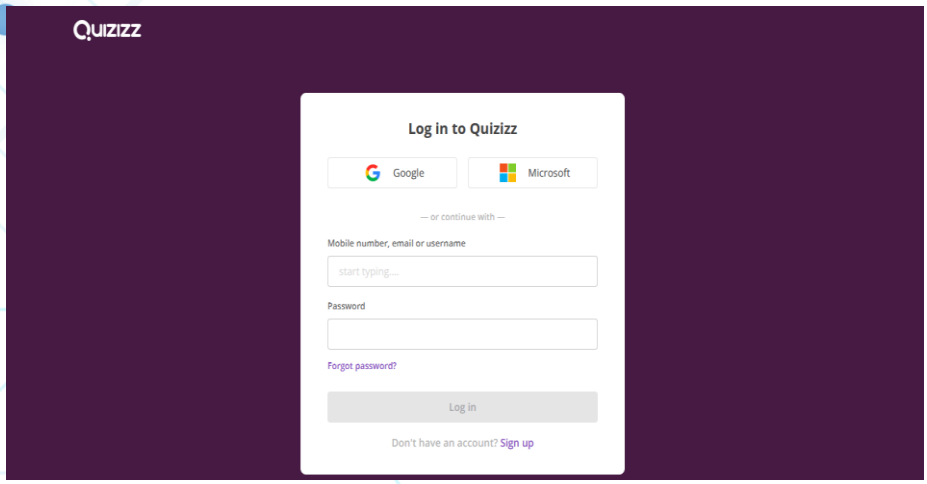
facilitate access to the Quizizz application. The procedure is by clicking the Sign up writing listed, then briefly completing the biodata needs in the registration to indicate that it is you. Suppose it has registered as an account. In that case, the report can be used wisely in accessing the Quizizz application by clicking the login writing in the Quizizz application and using the account terms. Namely, the email and password used when registering before. When we enter the web, of course, have been registered as me from the Quizizz application, we will be faced with the scene of the library, where there is a collection of quiz media, which has been presented by the Quiz Maker before. In addition, we can freely choose the quizzes available in the Quizizz application according to the needs of teachers in operating the Quizizz application. From the name, which begins with kata Quiz, of course, there are various variations of quizzes that are presented. However, to increase the creativity of each account owner, Quizizz makes it easy to create your quiz, which is illustrated through your creation by clicking the create my quiz writing. Here are the procedures and operations of the Quizizz application in a nutshell:

a) Go web, type Quizizz.
b) If you don't have an account yet, click Sign up.
c) Fill in all the conditions of account registration
d) Log in to the Quizizz app, click login
e) Fill in the email and password used when registering an account
f) Determine the quiz model; you can create your own by clicking create my quiz

Thus the variety of learning media through the Quizizz application can be utilized and operated as appropriate by using the ease of educational technology amid a pandemic. The operation of the Quizizz application is as follows:

a) Get into [the www.quizizz.com](http://www.quizizz.com)

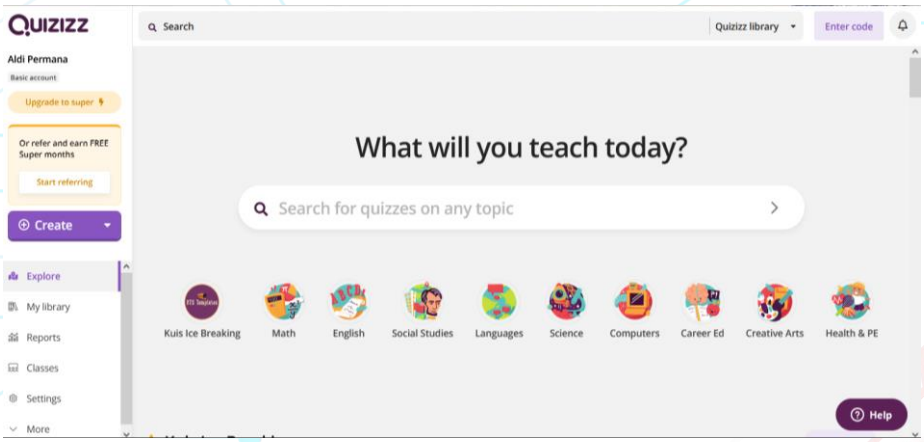
b) Click log in



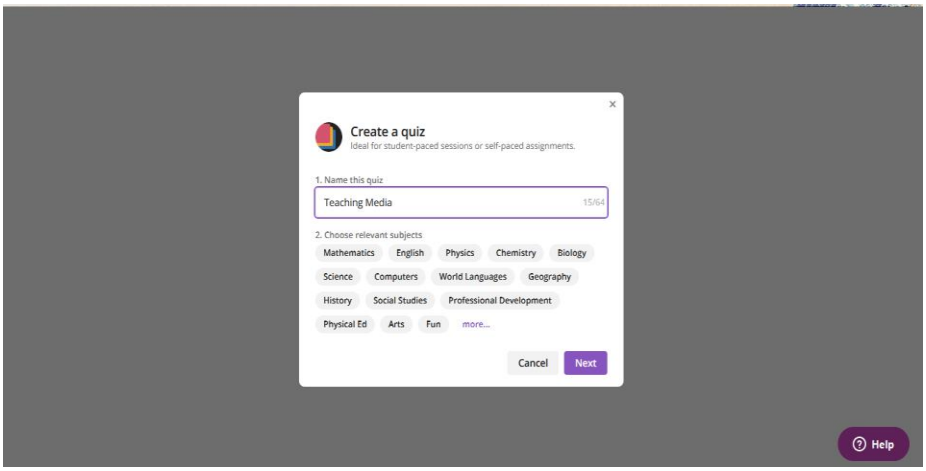
c) Then, click the teacher's post as the teacher.

d) Enter your identity in the form of a username, email, and password

e) If it has been declared entered, then create a quiz; in writing, create a quiz



f) Let's Create a Quiz display appears.

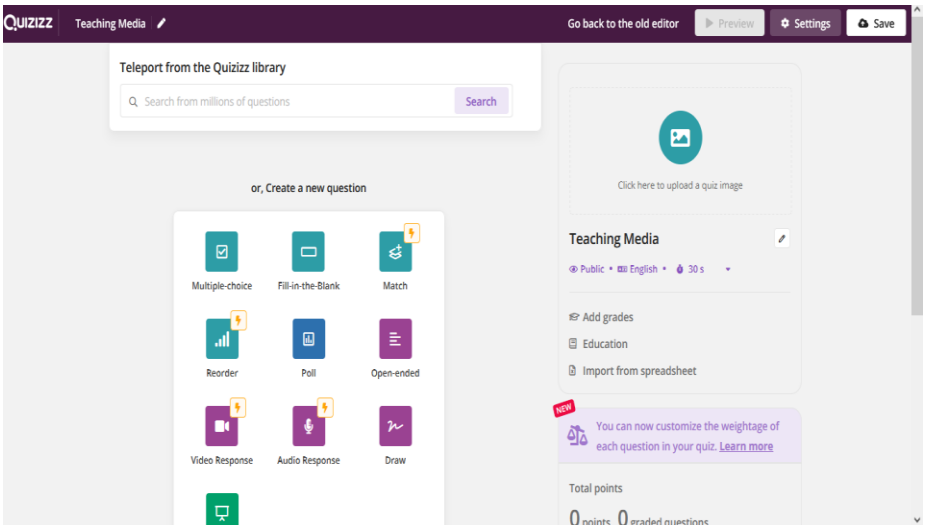


g) Enter the name of the quiz, for example, Teaching Media

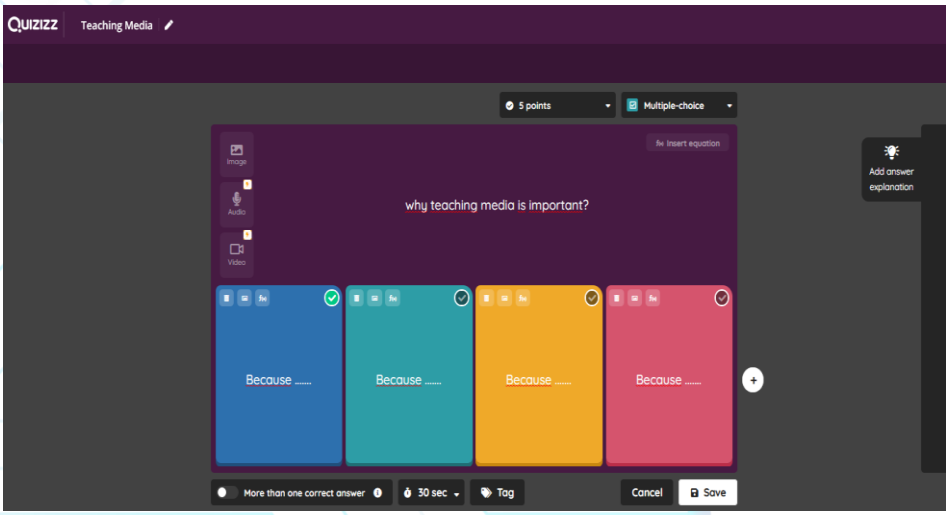
h) Then click Next

i) Next view appears, click Create new question.

j) Specify the Question type to select.

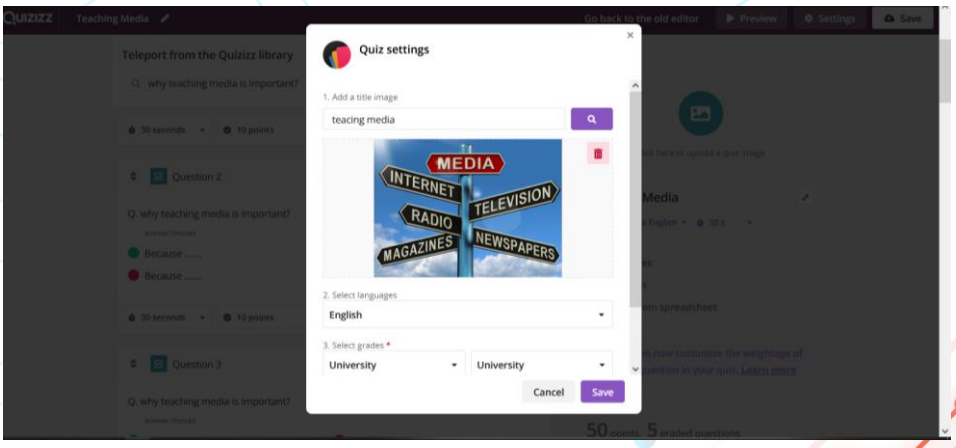


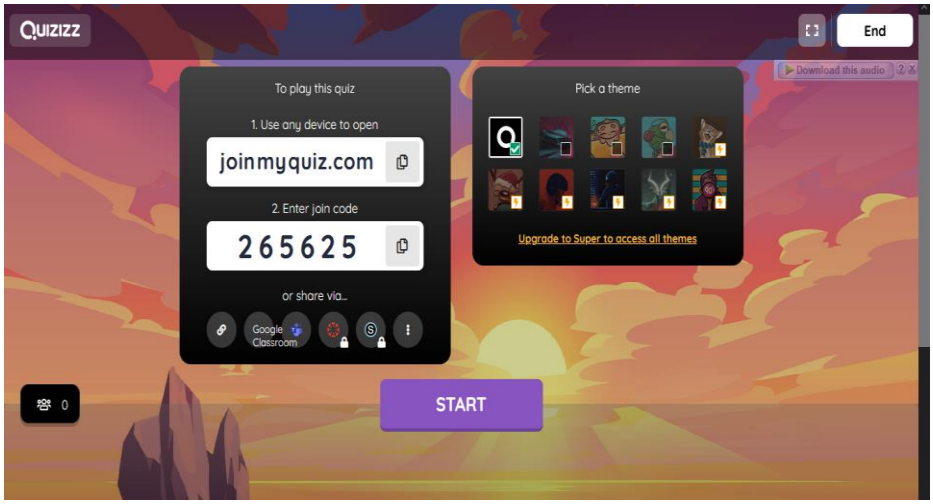
k) Then type the question at the top and the answer at the bottom, a checklist of one of the answers. This section can set how long students can do the questions.



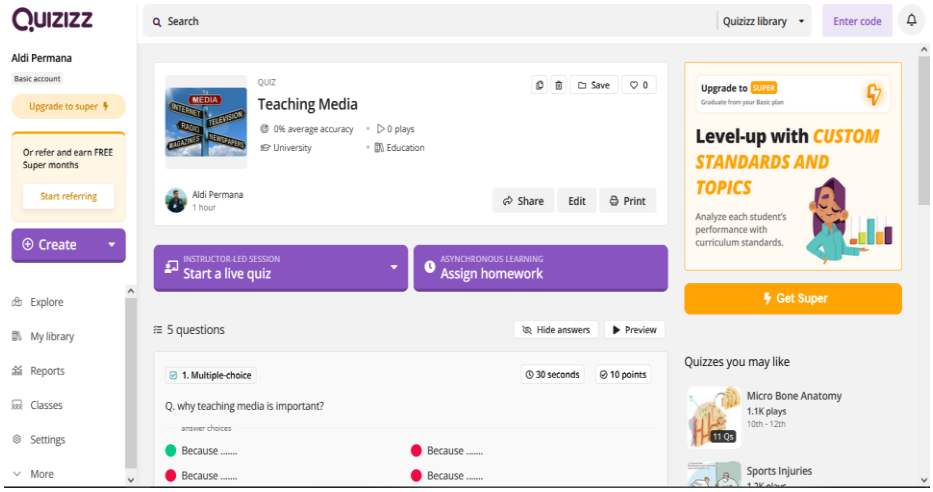
l) Determine the quiz settings, including showing who the quiz is.

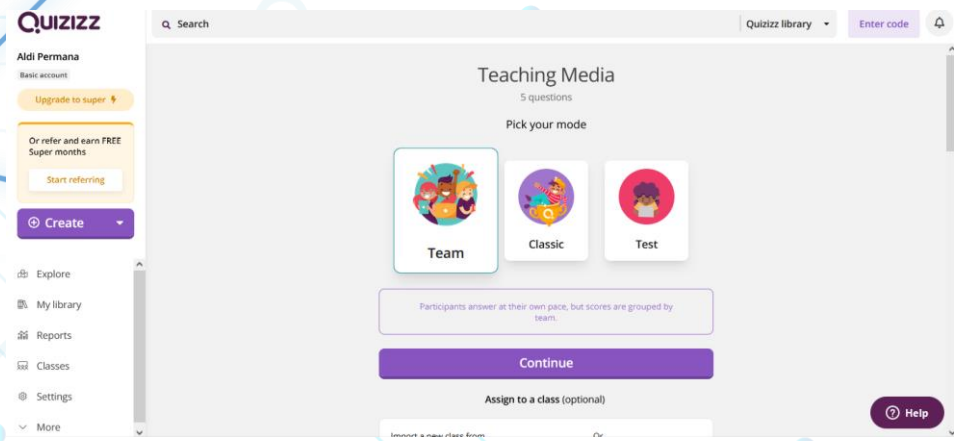
m) Then click save.





n) Then, the following display appears; select "Homework" if you want to use it as a Homework, and choose "Play Live" if you're going to use it now.

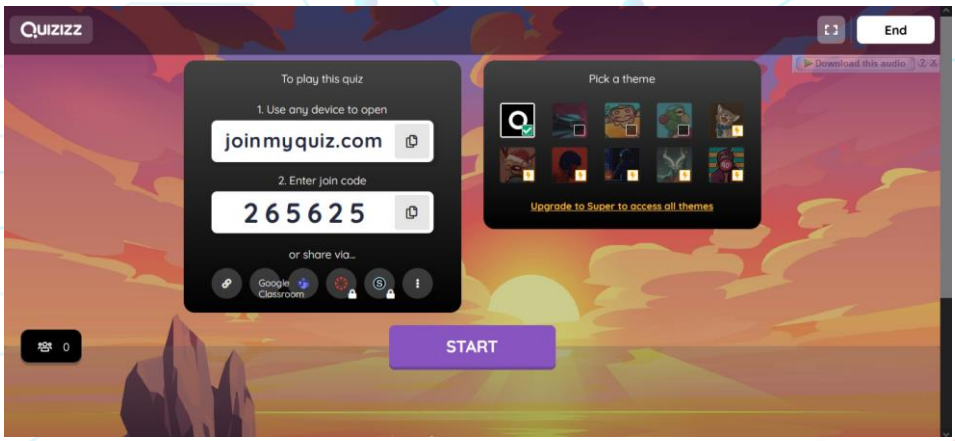




o) Enter the deadline or deadline for doing it (set the date and time), then click "Proceed."

p) Then, the following display appears: the code used to enter the quiz work.

q) Then open the Link "http://quizizz.com/admin/" to operate the Quizizz application as a learning medium.



3. Blended/ Hybrid Learning (Zoom, Google Meet, Classroom)
    a. How To Make Google Form Into A Quiz

        Google Form is a site-based application that allows its users to create surveys that can be customized according to their needs. So, users can get answers directly from the audience who took part in the survey.

        Not only that, but educators can also use this Google Form to make quizzes and tests for their students. What do I use this Google form like? Let's look at the following article!

        The first step that the user has to do is to open Google Drive. After that, click on the nine dots icon at the top right. Select Google Forms and click the "+" icon to create a new form.

        A formula will be formed with a display like an image below. Users can provide a form title according to their wishes, for example, "Daily Test Class 7-A".

        For the form to take the form quizzes and quizzes, click the settings button at the top right and open the Quizzes menu. After that, the user clicks on "Make this a quiz." There is also an option for respondents to see the right or wrong answer.

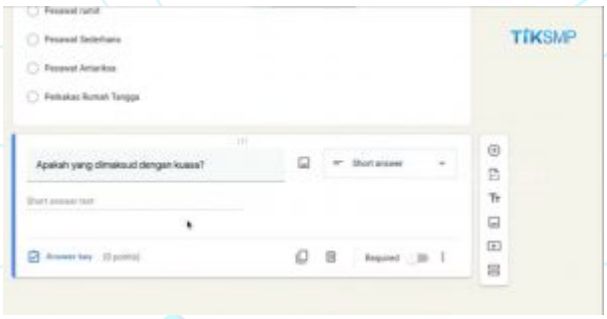
A form will be formed with a display like an image below. Users can provide a form title according to their wishes, for example, "Daily Test Class 7-A".

For the form to take the form quizzes and quizzes, click the settings button at the top right and open the Quizzes menu. After that, the user clicks on "Make this a quiz ."There is also an option for respondents to see the right or wrong answer.

1) Create a question with a short answer

In addition to multiple-choice, Google Forms also provides the option to book questions with short answer fields. The trick is to click the add question button with the (+) icon on the right side of the question.

Next, fill in the question column with a short fill-in-the-blank question to be given. Change the question type to "short answer" so that participants can write quick answers to the questions asked.



2) Create a question with more than one answer

Another question model that can be created is a question with more than one answer. The trick is to add the question back and write the question to be asked. Then, in the question type, change it to Checkboxes.

Fill in the question field with the question command. For example, "consider some of the following equipment!". Add an

image by clicking the button next to the question column and upload it into the question.

Next, provide an image caption by clicking on the three dots icon to the left of the image. Enter the correct answer choice. Don't forget to fill in the answer key. Here, users can choose more than one right answer.

b. How to Enable Zoom Supporting Features

1) Zoom Sense

The Zoom software launched in 2013 and became a unicorn company in 2017 with a valuation of up to $1 billion on the NASDAQ stock exchange. Zoom can be accessed for free (basic) or paid **(pro).** Zoom basic allows users to conduct video conferences with a maximum duration of 40 minutes in each meeting with several participants of up to 100 people. For Zoom pro or subscription,

The Small Teams Zoom service varies in the price range of $15-20 per month with a group meeting duration of 30 hours, a recording license of up to 1GB, social media streaming, and specific additional add-ons with the number of participants that can be upgraded up to 1000 people.

If readers have an even greater need, please try to subscribe to **Zoom Business, Zoom United Business, Zoom Enterprise**, or other Zoom features. Of course, with a special offer, Zoom has a higher price than the two features described earlier.

There are various applications similar to Zoom, such as Google Meet, which is also widely used for online learning. Grams can learn how to use it through the Practical Guide to Online Learning With Google Classroom below.

2) Zoom Function

Zoom helps its users connect, communicate, and communicate ideas so that they can complete their projects together. Zoom can be accessed using a PC or smartphone by installing an application.

Zoom, with its five central values: Company, Customers, Community, Teammates & Ourselves, is committed to continuing to strive to improve its facilities and primary functions. Let's look at the chart below, which contains the main facilities offered by Zoom.The game bar above summarizes the functions and facilities offered by Zoom.

1) Meetings

   Zoom makes meetings accessible from anywhere and from any device, making it easier for everyone to join. Zoom sync with calendar makes meeting schedules efficient and secure with data encryption and meeting passcodes and fits your waiting room.

2) Chat

   Integrated messaging streamlines the workspace and allows everyone who joins the group chats to make phone calls and meetings. Files can be archived, making it easier to find history.

3) Phone

   A service that allows us to make phone calls through mobile phones, desktops, desk phones, and Zoom for Home devices.

4) Zoom Rooms

   Zoom meetings collaborate with various hardware and Zoom Cloud to hold meetings and share content. Zoom Rooms makes it easy for users to share wireless services so that meetings can be shared with multiple desktops or people on one network.

5) Webinars

   Presenting a webinar with the presenter as the main display, book again the presentation slides. The presenter or speaker will be directly connected to the participants and can look stunning with a wide selection of virtual backgrounds, studio effects, and silencers so that noise can be minimized. Zoom Webinars allow the number of participants up to 50,000 people and can be connected to a variety of live streaming options so that the number of viewers can be more than 50,000.

c. How to Use Zoom Meeting

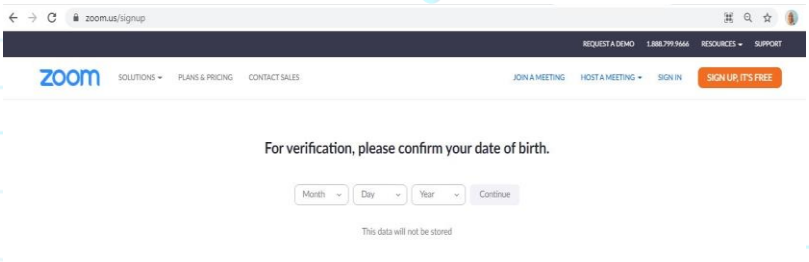
   Having figured out what Zoom is and its primary functions, we will discuss how to use It. Oh yes, Zoom can be accessed using phones, desktops, mobile phones, and tablet devices, you know!

1) How to Create a Zoom account

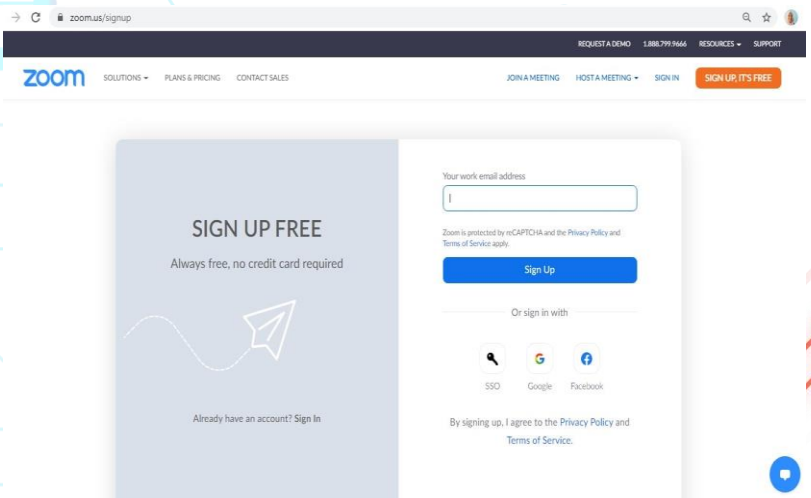
The creation of a Zoom account must be done by the person in charge of holding the meeting (Licensed User). In contrast, the participant (Participant) does not need a Zoom account to enter the meeting unless the meeting organizer makes an authentic authorization where the participant must have a user ID. Here are the practical steps:

a) Log in to theom.us/signup https://zo web

b) Fill in the date of birth data (this data is used by Zoom to verify the age of Zoom users at least 16 years old), click Continue



c) Fill in the email address data to be registered, and click Sign Up after reading the Privacy Policy and Terms of Service apply.



d) If you have an email inbox, check the email from Zoom titled **"Zoom account activation,"** then click the **Activate Account** button.

e) If the Activate Account button doesn't work, Zoom also sends an alternate link for account activation.

f) Happy Zooming!

After having a zoom account, as a Licensed User, we can hold as many virtual meetings as possible via zoom, either scheduled meetings or one-time meetings. The minimum number of participants is three people, and the maximum is 100 people (basic) or 1000 people (pro).

2) Host, Co-Host, and Participant Functions

Before starting a meeting, we must understand the roles in the Zoom Meeting. There are three leading roles in Zoom Meeting: Host, Co-Host, and Participant.

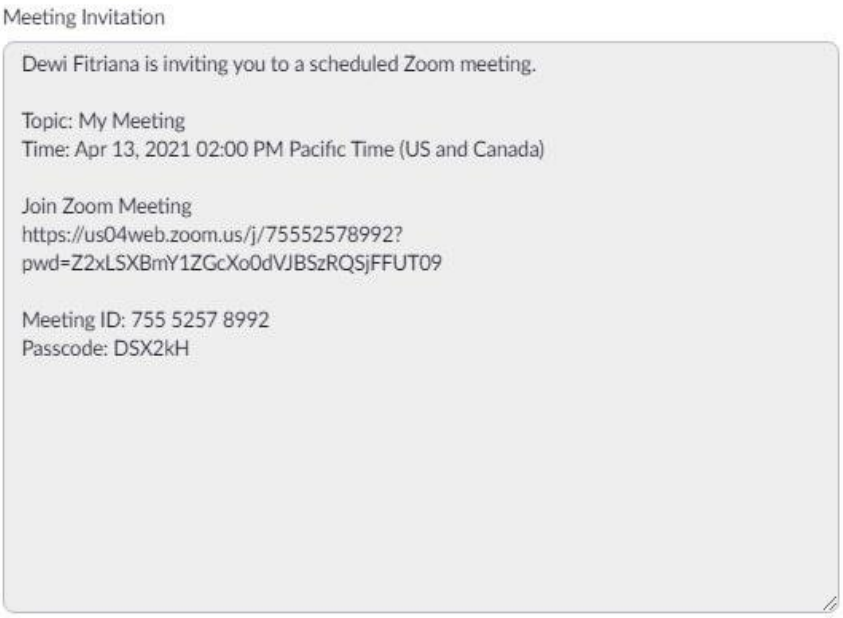
The host is the person who manages every aspect of the Zoom meeting, including participants. People who act as Hosts to arrange meeting schedules are, of course, people who have Zoom accounts, both basic and pro. Here are the features that can only be done if you are a Host:

- Get started with live streaming
- Start and stop meetings for all participants
- Appointing a participant as a Co-Host or a replacement Host
- Activate the waiting room
- Enable the closed captioning (cc) feature for Zoom pro

The co-Host is the person the host appoints as an assistant when he is already in the Zoom Meeting. They have the same features; both can record meetings and limit participant interactions, such as turning off audio and sharing screens for presentation functions. Co-Hosts can also remove or enter participants waiting in the waiting room to join the meeting.

3) How to Join a meeting on Zoom

Joining Zoom meetings can be done in several ways, namely:



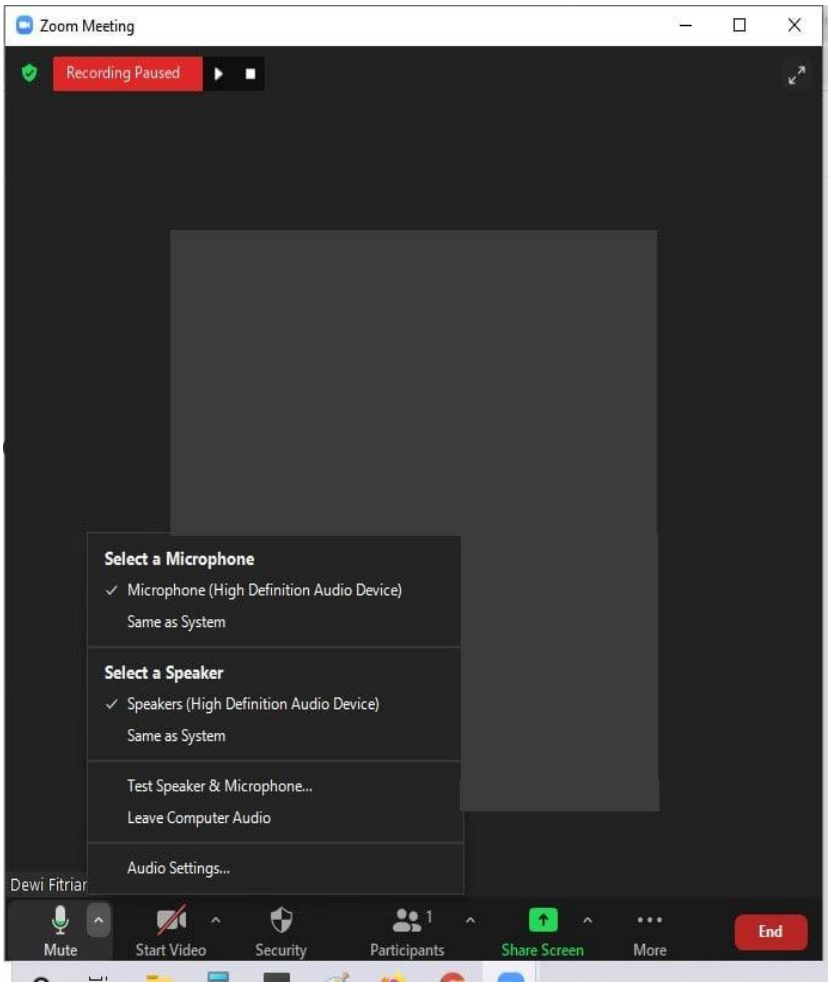
Way 1: Click the link invitation (can be done even if the participant does not have a Zoom account)

Way 2: Log in to zoom, click the Join Meeting button, enter the Meeting ID and Password of zoom meeting if needed, and click Join.

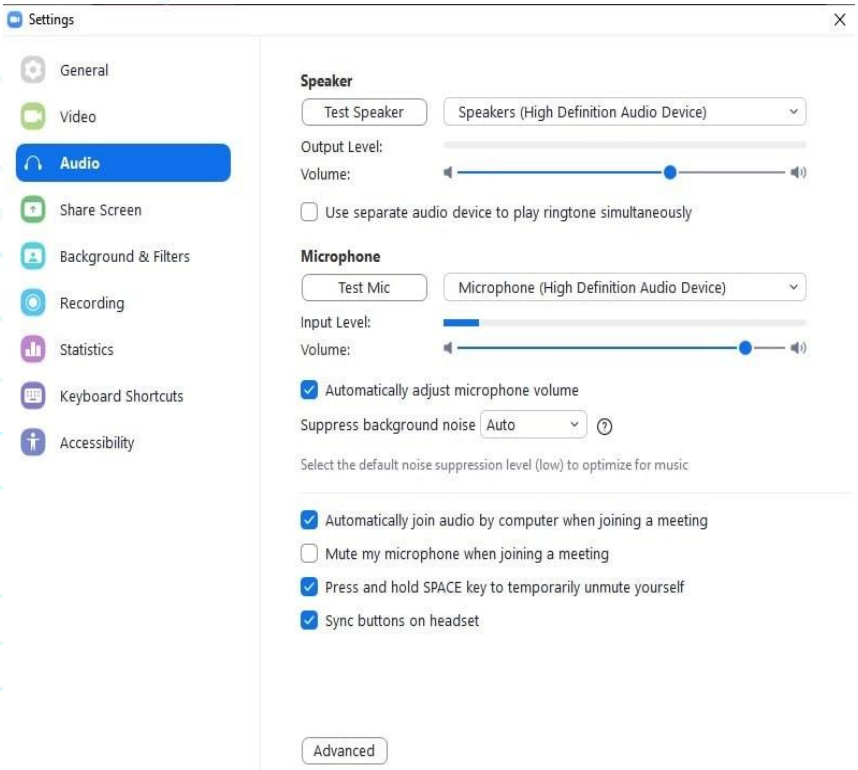
After joining, it is necessary to do the following:

4) Audio device activation

This is how readers are logged into the Zoom Meeting. Activation of the audio device consists of microphone settings (if using a headset) and speakers (if not using a headset).



Well, this is the appearance of the Reader clicking on Audio Settings which contains the detailed function of the Zoom Meeting audio settings.

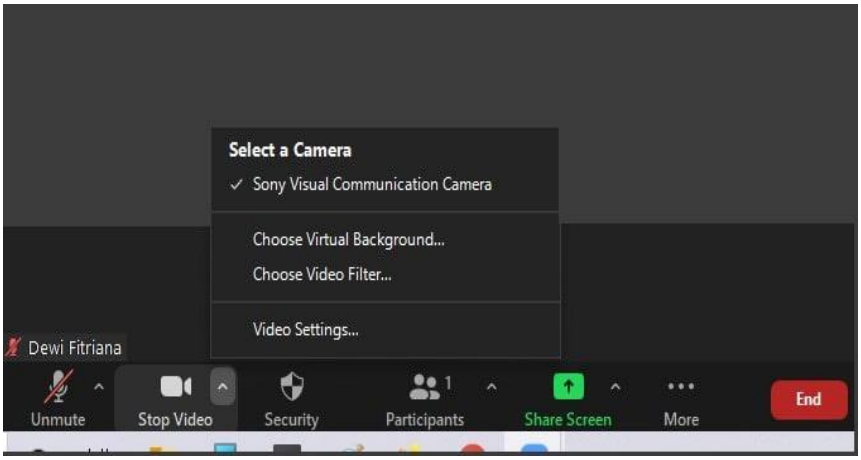


Two images on the Zoom display denote audio:

- This means that the speaker is on. To listen to the sound more clearly, please raise or reduce the volume of the sound on the desktop or mobile phone.
- This means the microphone is off; if we want to talk in the meeting, make sure the microphone is on (no strikethrough) and start talking.

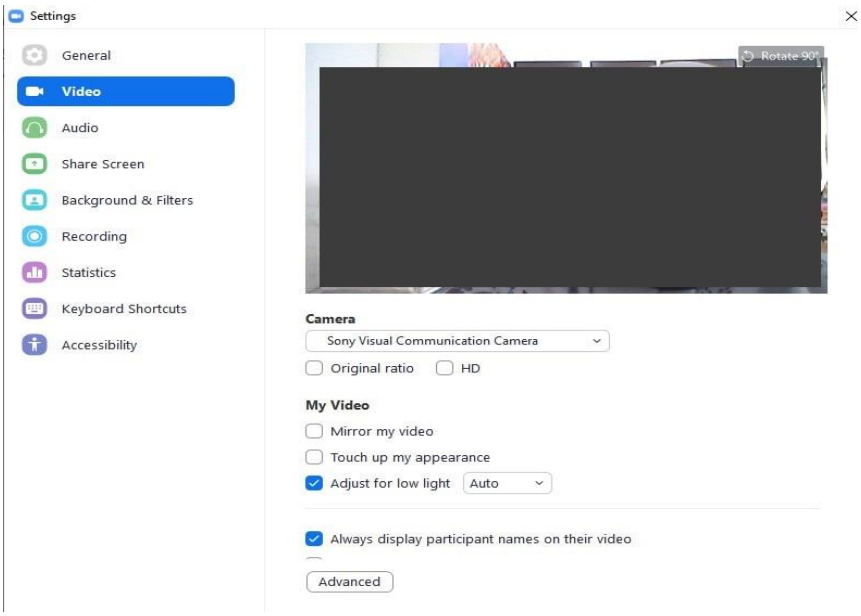
5) Webcam Activation

Like Audio, The Camera Settings Must Also Be Comfortable When Using Zoom. I Am Currently Logged In To Zoom Using A Sony Laptop, So The Camera Display Option That Appears Is The Sony Visual Communication Camera.



A virtual Background is an option. If we want to use a mere background options meeting, we need to upload the background photo we want to use. The best result is if we use a green screen when conducting a Zoom Meeting so that the background appears clear.

Video Filter is an option with a smartphone camera filter feature to make our face look how we want it to be. Video Setting is a setting that can be determined for the best video display; here are the options:



6) Get to know the Chat Feature in Meetings

This feature allows everyone in the Zoom Meeting to send messages with two modes: Reply to Everyone (our chat will be readable by everyone) and Reply to Participant (chat can only be read by one recipient of the message we are referring to).

This feature is one of the communication alternatives when the participant does not allow communication by activating audio or camera. For example, participants attend meetings when they are on noisy public transportation.

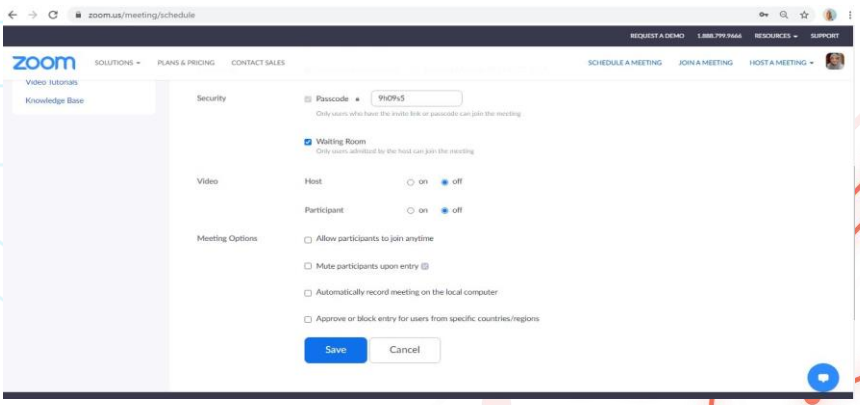
7) How to Use Zoom Meeting While Recording

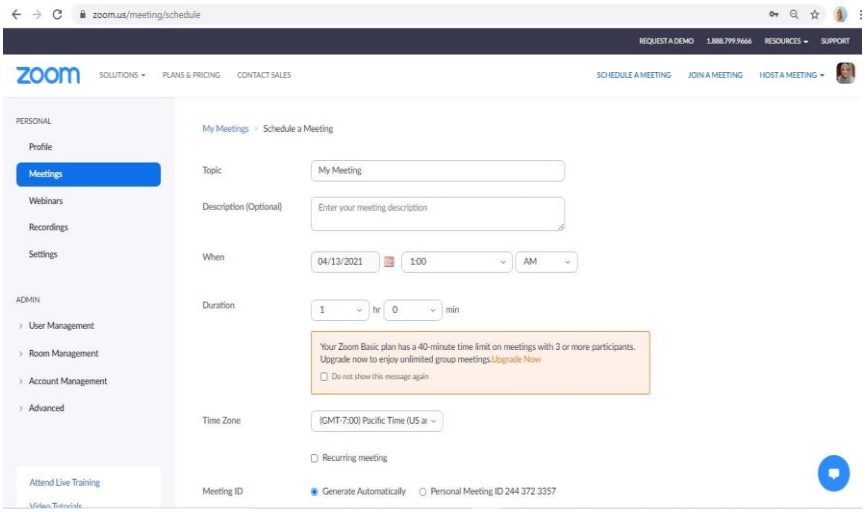
The Host and Co-Host can record every Zoom Meeting session; make sure the signal is stable so that we do not bounce out of the meeting, which results in the recording being interrupted. Recordings can also only be accessed after the session is over.

So, if the Host and Co-Host record a meeting, they can only save and automatically convert the recording into an mp4 file if they have left the meeting.

8) How to Create a Schedule Meeting

Log in to the Zoom account and click Schedule Meeting, then this follow-up display will appear. Fill in each required data field according to the meeting details we want, then click the Save button. **Some critical parts that must be observed include:**





a) Time Zone

If we want to hold a meeting repeatedly, then tick marks the Recurring Meeting section. Next, a choice will appear if we wish to repeat sessions daily, weekly, monthly, or for a certain period. Also, fill in the section on when the meeting end date.

b) Passcode

The passcode code is generated automatically by Zoom. However, it is editable, meaning we can change the passcode according to what we want to make it easier to remember and easier in the process of joining meetings.

c) Waiting Room

If Kita wants to gather participants in 1 particular room before entering the meeting room, then use this feature. This feature makes the meeting room conditions more conducive because it could be that our meeting invitations are spread out in general so that it allows anyone to join. The Waiting Room feature allows the Host and Co-Host to select who can participate as meeting participants.

d) Meeting Options

Allow participants to join anytime; by clicking on, we allow participants to enter the room at any time, either at the beginning or the middle of the meeting. To keep the forum conducive and disciplined, the host should not click on this option so that participants cannot arbitrarily enter the room in the middle of the meeting discussion.

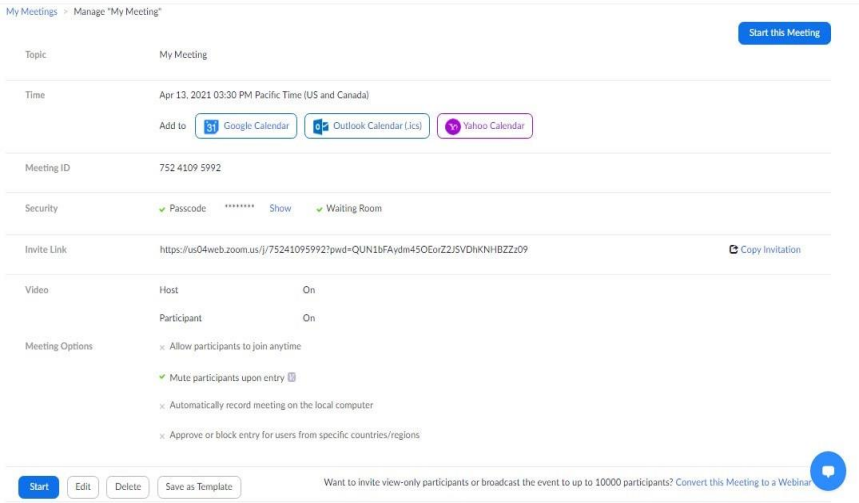
Mute participants upon entry; by clicking this, the participant enters the audio off state. It is also to keep the meeting conducive so that there is no noise when participants enter the middle of the discussion.

Automatically record meetings on the local computer; this option is to record and save meeting recordings on the local computer.

Approve or block entry for users from specific countries/regions; the option is a choice of which countries are allowed and are not allowed to enter the Zoom Meeting.

e) Distribute meeting invitations to participants

After clicking the Save button on point (b), which means we have finished creating the meeting schedule, here is the display that will appear:



- Click the Copy Invitation link to be able to distribute meeting invitations to all participants. Meeting invitations can be shared via text message.
- Click Start to start the meeting (the waiting room begins actively)
- Click Edit to change the meeting details
- Click Delete to cancel the meeting
- Click Save as Template to save the meeting schedule for future use.
- The template can be viewed in the Meetings Tab.

The following is how to activate the Sharing Screen feature on the Zoom application.

- Start your Zoom meeting as a Host.
- Click the arrow to the right of the Share Screen, and then select Multiple, multiple participants that can be shared at the same time.

Sharing screen has several other features similar to Sharing Screen, such as the Side-by-Side feature, Sharing Whiteboard, and creating a Virtual Background.

- Side-by-Side

  This feature allows you to see the screen together next to the speaker or gallery view, depending on which display you choose. You can also adjust the location of the separator between the shared screen and the video to change the relative size of each side. How to enable the Side-by-Side feature:

  - During the meeting and viewing screen, click on view options and select Side-by-Side.
  - The combined screen will appear on the left, and the speaker will appear on the screen on the right. Slide the separator left or right to adjust the size of each view.
  - Click Speaker View or Gallery View at the top to switch between the two.
  - To exit Side-by-Side mode, click View Options, then uncheck the Side-by-Side mode option.
  - The speaker video will be displayed at the top of the screen, the same screen in the middle of the window.

- Sharing Whiteboard

  As the name suggests, it's clear that this feature is like a whiteboard, you can write anything, and other participants can write along (if allowed). How to enable the Whiteboard Sharing feature:

  - Click the Share Screen button located in your Meeting Tool.
  - Click Whiteboard
  - Klik Share
  - Annotation Tools will appear automatically, but you can press the Whiteboard option in Meetings Control to
  - Show and hide it.
  - Use the Page Controls in the lower right corner of the whiteboard to create a new page and switch to each page.

Note: Only participants or hosts who started sharing the whiteboard have access to create and replace pages.

- Virtual Background

  The Virtual Background feature allows you to display an image or video as your background during a meeting on Zoom.

  This feature works well with a green screen and excellent lighting to allow Zoom to detect differences between your peers and your background. You can also upload your image or video as a virtual background. There is no size limit when adding a background as you like yourself, but it is recommended to use an image that matches the aspect ratio of your camera before uploading it. Example: If your camera is set to 16:9, an image of 1280 pixels x 720 px or 1920 pixels x 1080 pixels will work fine. How to enable Virtual Background:

  - Go to Zoom.
  - Click My Meeting Settings if you are an account administrator or Meeting Settings if you are a member.
  - Navigate to Virtual Background on the Meeting tab and verify that the setting is enabled.

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