

# Traditional vs. Modern Educational Media in the Digital Age: Mapping Activities

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**Abstract**— The transmission of teaching by a teacher to groups of students who are the recipients of the information is referred to as traditional education. This paper is a literature review of traditional and modern educational media activities mapping, in which the work includes research papers on the subject and answers to research questions (RQ), as well as tables and statistics to summarize data and provide readers with easy summaries of papers on the subject. The fundamental purpose of this research is to conduct a literature review and evaluation of traditional and modern educational media. Our contribution was to present a comprehensive and up-to-date summary of extant research in traditional and modern educational media, with an emphasis on idea and evaluation. This study includes the design of research questions, the process of searching for articles, the process of selecting articles, the process of conducting quality evaluation, and the process of data extraction

**Keywords**— *digital age, educational media, traditional educational, modern educational*

## I. INTRODUCTION

Traditional education is described as the transmission of instruction by a teacher to groups of students who are the recipients of the information. Traditional schools provide a strong emphasis on fundamental educational processes and academic achievement in the key areas of arithmetic, reading, writing, science, and social studies. Public schools generally follow this educational model.

Independent schools that operate outside of the public education system, religious schools, homeschooling, and online learning are further alternatives to typical public schools. Since many factors come into play when choosing a school, it's wise to look not only at the educational program, but also at social atmosphere and availability of support services.

Modern methodology, in contrast to conventional methodology, is significantly more student-centered. According to Jim Scrivener, the teacher's primary responsibility is to assist learning, which includes engaging pupils in the process by allowing them to work at their own pace, without offering long explanations, encouraging them to participate, communicate, interact, do things, and so on [1].

The primary goal of this study is to conduct a literature review on traditional and modern educational media, as well as their evaluation for mapping activities using educational media. While many research studies have been

conducted on this topic, we are aware of only few systematic reviews on the subject. Our contribution was to provide a complete and up-to-date overview of existing research in the conventional and modern educational media, with a focus on the concept and evaluation in this area.

For our research, research papers published in 2015 to 2021 from the IEEE Xplore database were stored and selected carefully with regard to the activities of using conventional and modern educational media.

## II. METHOD

On Fig 1, the method utilized by Kitchenham et al. [2], Liao et al. [3], and Nassif et al. [4] has been adopted and merged. The creation of research questions, the process of searching articles, the process of selecting articles, conducting quality evaluation, and the process of data extraction are all part of this study.

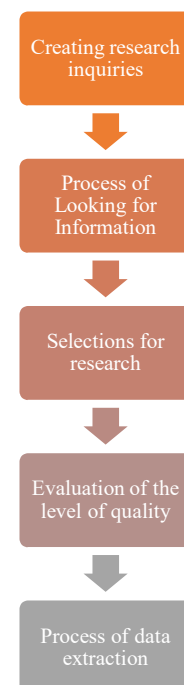


Fig. 1. Design of a Literature Review

### A. Creating research inquiries

The fundamental goal of this systematic literature review is to identify the issues that traditional and modern

educational media are trying to answer, and to provide concrete answers to those concerns. Keep the focus of the reviews with a Research Question (RQ). Table I contains descriptive and motivational information regarding the study's questions.

TABLE I. RQ. DESCRIPTION AND MOTIVATING FACTORS

Research Question	Motivation or Description
<b>RQ1</b> How to map activities conventional and modern educational media?	The question focuses on identifying activity mapping across both types of educational media.

### B. Process of Looking for Information

The article search procedure is divided into four stages: keyword definition, query string search, journal selection, and search process. Individual searches are given keywords in order to discover the most relevant paper search results. The following are the keywords that were used:

- “traditional educational \*” OR “concept” OR “evaluation” or “activity”
- “modern educational \*” OR “concept” OR “evaluation” or “activity”

For data collecting, IEEE explorer and Science Direct database libraries and resources are used. In September of 2021, a search was held.

### C. Selections for research

This stage involves creating a document that has all of the information about our search strategy. Table 3 shows the articles that were included and published based on the criteria listed.

TABLE II. CRITERIA FOR INCLUDING AND EXCLUDING ITEMS

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> <li>• English-language research papers;;</li> <li>• The original research paper was chosen as the primary study;</li> <li>• Relevant research papers on the main theme;</li> <li>• The research papers ranged in date from 2015 to 2021</li> </ul>	<ul style="list-style-type: none"> <li>• Papers written other than English are not included;</li> <li>• The paper does not answer the research question or does not define the topic correctly;</li> <li>• Duplicate article removal; Research paper with less than three pages</li> <li>• Research papers before 2015 and after 2021 are not excluded</li> </ul>

### D. Evaluation of the level of quality

Quality assessment is used to ensure that the primary studies selected provide enough information to answer the identified RQ[5]. The goal of this procedure is to improve the paper selection criteria. A list of Quality Assessment (QA) questions was established, and each paper was analyzed to select a more relevant study, with the hope that the majority of them would provide answers to this study's RQ. The research of Kitchenham and Charters [6] was used to evaluate the procedure's quality.

### E. Process of data extraction

The approach described above is used to extract data for data quality and classification data at the same time. Every

article yields the following information: Paper number, problem(s), concept(s), evaluation(s), and year in RQ1, RQ2, and RQ3 domains.

## III. RESULTS AND DISCUSSION

The Development Team for the Education Personnel Education Institution (LPTK), developed the 8 basic teaching skills that we have presented [7], [8].

### A. Opening and closing lessons

The teacher opens and closes learning by means of lectures. As for the purpose the main thing from activities to open learning, regardless of the type of activity what the teacher does should be aimed at creating the conditions for ready to learn (pre-learning). Skills to close learning, i.e., the teacher's efforts to bring learning to a close so that students can acquire experience learning as a whole from the learning outcomes achieved. Closing activities are similar to opening learning activities. The teacher can use a variety of methods or tactics to help students learn. For instance, you could conclude by drawing conclusions, writing a summary, doing contemplation, submitting a review, or delivering closing greetings, among other things.

### B. Questioning

According to Allen and Ryan, there are numerous strategies or tricks that can be used to transmit the question such that it can be answered, including [8]:

- *Tracking questions; that is, employing follow-up questions to delve deeper into the needed answers from students.*
- *Higher-order questions; they are follow-up questions posed to pupils in order to strengthen their analytical and comprehensive learning abilities.*
- *Divergent questions; this refers to the ability to come up with a variety of different types of inquiries in response to a situation.*

The activity of asking questions in modern education can be done by utilizing technology such as voice notes, video conferencing, sending chats, and others.

### C. Reinforcement

Reinforcement can take two forms: vocal reinforcement and nonverbal reinforcement. Words like "good," "clever," and others are acceptable. words that get a positive response from pupils [9], [10]. Reinforcement can also be done with digital media in modern education. If a pupil accomplishes an excellent job, for example, the system will display a message of praise.

### D. Variation

Various types of learning stimuli are provided. Stimulus can be varied in a variety of ways, including through the use of methodologies, media, teaching styles, voices, and differences in learning communication. Various media, including as LMS [11], [12], video learning, video conferencing apps, social media, wa/telegram groups, and others, can be used by variations.

### E. Explaining

a skill that allows you to transmit learning materials to students in a clear, concise, and fluent manner. Because one of the ultimate goals of learning is a change in desirable

behavior connected to information, attitudes, abilities, and habituation, the ability to explain is extremely crucial [13]. Examples of material explanations in the form of modules and presentation materials are shown in Figure 2 and 3. There are also daily and group assignments to reinforce the material.



Fig. 2. Class management

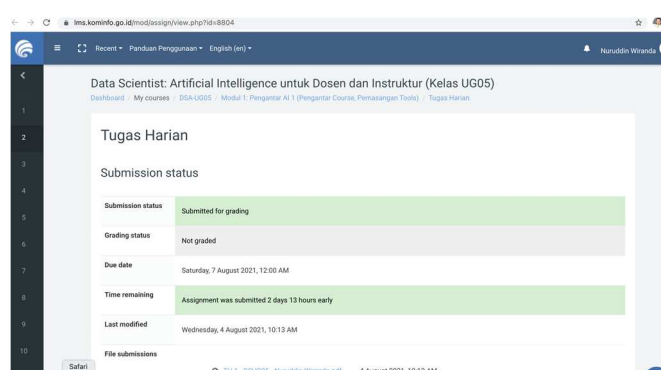


Fig. 3. Class management – Assignment

#### F. Guiding small group discussions

Presenters might introduce a topic or concept for group debate among participants in a small group discussion[14]. Discussions and communications are held in the WA (Figure 4) or Telegram Group (Figure 5).



Fig. 4. WA Group for discussions and communications



Fig. 5. Telegram Group for discussions and communications

#### G. Class management

Class management is critical for achieving optimum learning objectives by creating a favorable classroom environment. The utilization of classrooms [15], the use of time for teaching and learning activities, interaction/communication, atmosphere, class amenities, time, place, participation, and others are all factors to consider in classroom management.

#### H. Small group and individual teaching

Small group teaching is a student-centered approach to learning in which all students participate in a free conversation on a specific topic.[16].

Table 3 summarizes classic and contemporary learning activities.

TABLE III. MAPPING ACTIVITIES OF TRADISIONAL AND MODERN EDUCATIONAL MEDIA

No	Skills	Educational Media	
		Traditional	Modern
1	Opening and closing lessons	The teacher opens and closes learning by means of lectures.	Using video conferencing [17] such as google meet, skype and zoom.

No	Skills	Educational Media	
		Traditional	Modern
2	Questioning	According to Allen and Ryan [8], in order to respond to the questions submitted, they can use several tactics or tricks	Using LMS[11], [12], Google forms, or voicenote.
3	Reinforcement	The form of reinforcement can be done in two ways, namely verbal and non-verbal reinforcement.	Using voicenote or videocall.
4	Variation	Stimulus variations can be done in several ways, such as: in using methods, media, teaching styles, voices, variations in using learning communication, and so on.	Using video conferencing such as google meet, skype and zoom.
5	Explaining	a skill that allows you to transmit learning materials to students in a clear, concise, and fluent manner.	Using video learning [18], video conferencing or video recording and posting material on LMS[11].
6	Guiding small group discussions	Presenters might introduce a topic or concept for group debate among participants in a small group discussion	Breakout zoom, WA or Telegram Group
7	Class management	The utilization of classrooms, the use of time for teaching and learning activities, interaction/communication, atmosphere, class amenities, time, place, participation, and others are all factors to consider in classroom management	Using LMS and Video Education. Make WA Group for discussion
8	Small group and individual teaching	Small group teaching is a student-centered approach to learning in which all students participate in a free conversation on a specific topic.	Breakout zoom, WA or Telegram Group

#### IV. CONCLUSIONS

There are eight basic teaching skills that are commonly applied to traditional education, including opening and closing lessons; questioning; reinforcement; variation; explaining; guiding small group discussions; class management; small group and individual teaching. Modern education has been matched to the eight activities. In the modern era, learning activities such as providing teaching materials, adding questions, making student attendance lists, and evaluations can be done using LMS. Face-to-face

activities can be carried out using video conferencing applications. To communicate or discuss small or large groups, you can use messaging applications such as WA and Telegram. It is envisaged that the mapping of conventional and modern learning activities will result in effective collaboration, resulting in improved learning.

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