Implementation of Hard and Soft Technology in Learning Arabic During the Covid-19 Pandemic
(Study at MTs Sunan Kalijogo Kranding Mojo Kediri)

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ABSTRACT

There are some problems raised in learning Arabic by various educational institutions that encourage the teacher to modify the teaching and learning methods. It can be done by designing the development of hard and soft technology in learning Arabic. This research examines the design of Arabic learning technology at MTs Sunan Kalijogo Kranding Mojo Kediri, such as discussions on the design of hard and soft technology in learning Arabic, the implementation of hard and soft technology in learning Arabic, manipulation, and techniques of hard and soft technology in learning Arabic, and the use of hard and soft technology development in learning Arabic. This research is conducted with a phenomenological qualitative approach that explores the design of the Arabic learning technology development at MTs Sunan Kalijogo Kranding Mojo Kediri as a madrasa under the Ministry of Religion Kediri that actively participates in distance learning (PJJ) during the Covid-19 pandemic. The results showed that: 1) The implementation of Arabic learning technology development at MTs Sunan Kalijogo Kranding Mojo Kediri uses printed learning media in the form of Arabic books, dictionaries, student worksheets (LKS), teachers' questions, as well as learning media through pictures and writings. 2) Manipulation and technique of the Arabic learning technology development at MTs Sunan Kalijogo Kranding Mojo Kediri use storytelling technique associated with pictures containing mufradat related to daily life in both school and students' live environment. 3) The use of technology in learning Arabic at MTs Sunan Kalijogo Kranding Mojo Kediri during the Covid-19 pandemic asks students to look for references from the internet, youtube, and google related to the material being taught.

Keywords: Hard, Soft, Technology, Learning Arabic, Covid-19 Pandemic

1. INTRODUCTION

Language is the most critical Media for humans to interact with other people. Related to how people view learning Arabic, some see Arabic as the language of religion; it is a tool to use in studying Islamic Arabic books. The other sees learning Arabic as learning Islamic science's language because the majority of Islamic sciences refer to Arabic. Some think that learning Arabic is learning a language; this view focuses more on how people learn Arabic as daily communication [1].

The advance of information and technology development has influenced the education world. Nowadays, educational activities can no longer be local, although it is often suggested that education is delivered locally but have a global or international perspective. It means that the quality of education is improved to compete with graduates' quality from educational institutions abroad.

The current discourse is that people who learn Arabic are considered conservative because they are only taught by kiai in Islamic boarding schools. Learning Arabic does not get an elite place in the national education system because Indonesian education is still dichotomizing general education on the one hand and religious education.

Thus, to run the Arabic learning process well, have competitiveness, and compete with other foreign language lessons, it is necessary to master the Arabic learning methodology. Another way is being able to use modern internet-based learning media following the information and technology era. Even though they are in a local educational institution, they can compete with other international educational institutions.

Learning technology is a study or practice of ethics to facilitate learning and improve performance by creating, using, and managing technological processes appropriate to resources. The learning technology area includes five areas, where the design area includes applying various theories, principles, and procedures in planning or designing a program or learning activity that is carried out systematically and systemically [2].

Learning technology aims to enlighten the learning problems or facilitate learning activities. Learning technology as software in systematic learning problem solving is increasingly sophisticated and has a vast place in the education world. The practical application of learning technology in solving the learning problems has a concrete form with learning resources that facilitate students to learn.

The design of learning technology includes applying various theories, principles, and procedures in planning or designing a program or learning activity that is carried out systematically and systemically. What is meant by design here is the process of determining learning conditions to create strategies and products. Strategies and products at the macro level include programs and curriculum, while the micro-level covers lessons and modules. Learning design has long been a concern of learning technology, from ancient times until now. It continues to develop, along with advances in science and technology [3].

Ahmed Mahmoud, Egypt lectures viewed classical technology development. He argued that the evolution of the TV production technology and its latest developments, and the development of the multiple different aspects of the systems and devices to be able to catch up with the creative aspect of the creators of the media content of the visual image in general and television in particular, and also Exposure to the role that played by this technological development to advance the media message presented [4].

Web-based learning, which includes new online educational technologies and social media websites like Facebook, plays a crucial role in education among millennial learners. According to Alkoudmani, Podcasting, webinars, and online learning management systems have been used in pharmacy and medical education to share knowledge with peers and students interactively. Learners can use laptops, iPads, iPhones, or tablet devices with a stable and good Internet connection to enroll in many online courses [5].

Rahmat Iswanto conveyed the urgency of applying technology in Arabic learning in one of his studies. He found that technology can play a role in the harmony and continuity of Arabic learning from elementary to senior high levels and can create realization and relevance to what students feel [6].

Meanwhile, Eka Utari Handayani, in her research related to the design and development of the Arabic language curriculum, stated that the digital technology approach in developing the Arabic language curriculum could be a way to conduct learning without being limited by place and time [7].

Based on this study, a study on the Arabic learning technology development design during the Covid-19 pandemic has never been carried out comprehensively. This research is offered as an alternative so that the Arabic language learning process under the Ministry of Religion's authority can continue to run effectively.

2. METHOD

Researchers use a qualitative approach. It uses a theoretical orientation or perspective analysis method. The researcher takes a phenomenological approach, in which the researcher tries to find the meaning of a reality behind the interactions done by the subject with the object. The subject is the instrument to uncover the meaning of the phenomenon that occurs.

The research findings are the design, implementation, manipulation, and utilization of technology in learning Arabic at MTs Sunan Kalijogo Kranding Mojo Kediri.

This research site is MTs Sunan Kalijogo, and it is one of the Madrasah in Kediri city. The research subjects are Arabic teachers; all Arabic teachers have a bachelor's degree. The other subjects are curriculum staff, school principals, and students from grades seven and eight. The research instrument is the researchers. As the research instrument, the researchers are in charge of planning, collecting data, analyzing and interpreting the data, and reporting the research results [8].

Sources of data in this research are informants, activities or events, locations or places, archives/documents related to the design of the Arabic learning technology development at MTs Sunan Kalijogo Kranding Mojo Kediri. Data collection techniques are in-depth interviews, participant-observer, and documentation [8].

Researchers use Miles and Huberman's data analysis. This analysis is interactive and emphasizes the continuity of the data to the point of saturation. Miles

and Huberman's data analysis begins with data reduction, then data display, then concluding/ verification. Besides, researchers use inductive, deductive, and comparative methods [6].

The next step is validity testing by cross-checking the data from observations, interviews, and existing documents so that the data can be said to be accountable. The researchers use triangulation, including triangulation of the sources, times, and methods. Besides, researchers also use peer debriefing; it is done by discussing the data obtained with experts who have relevant knowledge [7], such as the fellow lecturers in the Arabic Language Education of IAIN Tulungagung.

3. RESULT AND DISCUSSION

3.1. Design of Hard and Soft Technology Development in Arabic Language Learning

The word technology comes from the Latin "Tekno," which in English is "art." While the word "logos" is "science." According to Webster, "art" is a skill acquired through observation, study, and observation. Thus, technology is a science that discusses skills obtained from experiential observations, studies, and observations. In education, technology talks about objects, tools, materials, and the attitude, actions, organization, and management associated with the implementation of science.

Learning comes from the word "learn," which then becomes a verb in the form of "learning." Learning is a problematic aspect of human activity that cannot be fully explained in detail in this paper. Learning in simple terms is the product of continuous interaction between development and life experiences. In a more complex meaning, the essence of learning is a teacher's self-conscious effort to teach students (leading to student interactions with other learning resources) to achieve the expected goals [9].

Learning is the product of continuous interaction between the main goals of learning technology developments in solving the learning problems. The implementation of technology in Arabic language learning is how technology can solve problems of learning Arabic.

The first area of learning technology is design includes applying various theories, principles, and procedures in planning or designing a program or learning activity that is carried out systematically and systemically. What is meant by design here is the process of determining learning conditions to create strategies and products [10]. Learning design has long been a concern of educational technology, from ancient times to the present. It must develop along with the advancement of science and technology.

Learning system design is an organized and systematic procedure for:

a)   What formulation process will be studied

b)   The process of describing how to learn

c)   The process of writing and producing or producing learning materials

d)   The Use of materials and strategies

e)   The process of determining the accuracy of learning [11]

Everything needs to be adequately planned, including learning, the learning system design procedures to produce effective and efficient learning activities.

Learning technology experts have developed various learning system design models, both macro and micro design models. This model is applied by adjusting to learning needs. In the learning design, there are several models put forward by experts. In general, the learning design model can be clarified into class-oriented models, systems-oriented models, product-oriented models, procedural models, and circular models. Class-oriented models refer to micro-level learning, which is only done every two hours of lessons or more. An example is the assure model [12].

Product-oriented models are learning design models to produce a product, usually instructional media, instructional videos, learning multimedia, or models. The examples are the bannafin and peck model. A system-oriented model is a learning design model to produce a wide-ranging learning system, such as a training system design, school curriculum, and others.

The various models can be beneficial; some of the advantages include being able to select and apply a learning design model that is following the characteristics faced in the field; besides, it can be developed and made a derivative model of the existing models, or it can also be researched, developed, and improved.

3.2 Implementation of Hard and Soft Technology in Arabic Language Learning Development in Mts Sunan Kalijogo

Technology cannot be separated from people of this advanced era. It will increasingly develop following the times. Technological advances are used in the economic, political, and industrial fields and education, especially in learning Arabic.

Learning technology development is applying and assessing systems, techniques, and tools to improve and enhance the learning process. Learning technology experts point out the primary role of educational

technology to increase efficiency that facilitates the teaching and learning process. The educational technology application in the educational process makes the teaching and learning process more efficient, more effective, and provides positive added value [13]. Effective and efficient means that the education carried out can achieve the goals with as little cost, effort, and time as possible [14]. The scope of this learning technology development includes [15]:

3.2.1. Soft Technology in the form of Printed Teaching Materials

It is a way of producing or conveying materials such as books, static visual materials, primarily through mechanical or photographic printing. This technology forms the basis for the development and utilization of most other learning materials. Text in computer display is an example of using computer technology for production. If the text is modified into printed form for learning purposes, it is an example of delivery in printed material.

In particular, this implementation has the following characteristics:

a)   The text is read linearly

b)   Usually provides passive one-way communication

c)   Shaped visual static

d)   Its development is very dependent on linguistic principles and visual perception

e)   Both are centered on learning

f)   Information can be reorganized and restructured by the user.

3.2.2. Hard Technology in the form of Audio-Visual

Audio-Visual technology is a way of producing and delivering materials using equipment and electronics 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 projecting of live images, sound playback, and viewing of large visuals. Audio-visual learning is defined as the production and use of materials related to learning through sight and hearing, which do not necessarily depend exclusively on understanding words and symbols of the same kind.

In particular, audio-visual technology tends to have the following characteristics; is linear, presents dynamic visuals, is typically used in a way previously determined by the designer/developer, tends to be a form of

physical representation of real and abstract ideas, developed based on behavioral and cognitive psychology principles, often teacher-centered, pay less attention to student learning interactivity.

3.2.3. Computer Based Hard Technology

Computer-Based technology is a method of producing and conveying materials using a device sourced from a microprocessor. It displays information to learners through a display 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 are almost entirely developed based on behavioral theory and programmed learning, but now they are based more on cognitive theory. These applications can be: 1) tutorials, main lessons are given, 2) exercises and repetitions to help learners develop fluency in previously studied materials, 3) games and simulations to provide opportunities to use newly learned knowledge, and 4) data sources that allow learners to access their structuring the data employing externally determined data tools.

Computer-based media, whether in the form of hardware or software, usually has the following characteristics:

a)   Can be used randomly, in addition to linear

b)   Can be used according to the learner's wishes, in addition to the way designed by the developer

c)   Ideas are usually expressed abstractly by using words, symbols, or graphics

d)   The principles of cognitive science are applied during the development

e)   Learning can be learner-centered with a high level of interactivity

3.2.4. Multimedia Based Hard Technology

Multimedia or integrated technology is a way to produce and convey materials by combining several computer-controlled media types. The features displayed by this multimedia technology, especially by using computers with high specifications, are the high interactivity of learning with various learning sources. Learning with multimedia or integrated technology has the following characteristics:

a)   Can be used randomly as well as linear

b)   Can be used according to the student's wishes and the way as designed by the developer

c)   Ideas are often presented realistically in the context of learners' experiences, relevant to

students' conditions, and under the control of learners

d) The principles of cognitive science and constructivism are applied in the development and use of learning materials.

e) Learning is centered and organized according to cognitive knowledge so that knowledge is formed as it is used.

f) Learning materials show high student interactivity.

g) The nature of the material which integrates words and examples from many media sources

Based on the observations at MTs Sunan Kalijogo Kranding Mojo Kediri, it can be concluded that the implementation of technology in learning Arabic could be applied well. It develops following the needs in the field, the need to learn, and to make learning more effective. The implementation of technology in learning Arabic at MTs Sunan Kalijogo Kranding Mojo Kediri uses printed media in Arabic language books, dictionaries, student worksheets, teacher questions, and learning media through pictures and writings. The writing is related to vocabulary, and the second uses audio-visual technology in the form of cellphones and LCDs.

According to Indahwati, as the Arabic teacher at MTs, students at MTs Sunan Kalijogo Kranding Mojo Kediri are more excited in learning when they are using audio-visual technology compared to printed media. They feel bored in class when they faced Arabic books.

3.3 Manipulation and Techniques of the Arabic Learning Technology Development in MTs Sunan Kalijogo

Learning technology is useful for strengthening various methods and techniques from the design, development, use of various learning resources, implementation, program assessment, and learning outcomes assessment [16]. Learning techniques are concrete methods used during the learning process [17]. The use of Arabic language learning techniques and models appropriate to the students' characteristics will support various potentials and abilities in learning Arabic.

Specific techniques or learning models are not intended to be better than other models but are tailored to the child's needs. In MTs Sunan Kalijogo Kranding Mojo Kediri, the teacher uses storytelling techniques linked to the teacher's pictures containing microdata related to everyday life in the school environment and the students' environment. Students pay attention to pictures with Arabic vocabulary on the blackboard or

displayed on the LCD. The vocabulary is read and studied together. Students are asked to memorize the mufrodat then asked to make a sentence (Perfect Sentence) to find out/test how much understanding and mastery of the students with the new vocabulary. This technique is considered the most effective for them because they are actively involved in learning.

3.4. Utilization of Hard and Soft Technology Development in Learning Arabic in MTs Sunan Kalijogo during the Covid-19 Pandemic

Utilization is the activity of using processes and resources for learning. It is essential because it discusses the relationship between learning and materials or learning systems. Those involved in utilization have a responsibility to match learners with specific materials and activities, prepare learners to interact with selected materials and activities, guide activities, provide an assessment of the results achieved by learners, and incorporate it into ongoing organizational procedures.

The use of technology in learning comes before the systematic design and production of instructional media. As the product of the first decade of the 20th century's visual education movement, in the early years of the 20th-century, teachers began to use short films related to the learning subjects in class.

The use of technology is divided into:

1) The use of Media. It is a systematic use of learning resources. The process of using media is a decision-making process based on the learning design specifications. For example, a film is introduced or followed up and patterned according to the desired form of learning. The principles of utilization are also linked to the characteristics of learners. A person learning may need visual or verbal skills to take advantage of practice or learning resources.

2) Diffusion of Innovation. It is the process of communicating through a planned strategy to be adopted—the final goal to be achieved changes. Over the years, the area of use has focused on teachers and media experts' activities assisting teachers. Utilization models and theories in use areas tend to center on the user's perspective; however, with the introduction of the diffusion concept of innovation which refers to the communication process and involves users in facilitating the process of adopting ideas, attention, then turning to the perspective of the organizer [18]. The role of technology can take on functions as learning factors [4].

3.4.1. Internet

The use of the internet and web can make a positive contribution to student academic activities and teachers. The internet and the web can allow teachers to explore

information and knowledge in their area of expertise. Through the use of the internet and the web, teachers will always be ready to teach students the latest knowledge. The use of the internet requires the teacher's ability always to be active in accessing the website in the area of his expertise.

The use of the internet for educational purposes is increasingly widespread, especially in developed countries. The internet helps to hold a more effective teaching and learning process. It supports the other media used previously, such as radio, television, interactive CD-ROMs, and others. There are some sites about the Islamic field, such as www.pesantren-online.com and www.nuonline.com. Meanwhile, the leading Arabic websites are like www.arabic.com, www.raddadi.com, and many more. If you look at the site www.radddadi.com as an example, you can see the various fields. Besides, the internet provides us many things such as daily sites, mass media sites, job sites, literary sites, computer sites, and more.

3.4.2 Interactive CD

VCD is also an effective medium for teaching Arabic. This tool is similar to a tip recorder, only more complete. The recorder tip is only heard, while the VCD is heard and seen. Nowadays, there are many Arabic language teaching programs written on CD, but it is not enough to operate them with a VCD but with a computer equipped with multimedia. In the context of ALA teaching, many ALA teaching programs have been packaged in CD form, for example, Ali-Ba-Ta, Al-Qamus al-Mushowwar li Ar-Shigor, Bustan Ar-Raoudloh, Juba 1-2, Jism Al-Insan, Hadiqoh al-Arqom, and more.

3.4.3 Satellite/Parabola

The satellite also makes it easy for the teacher to teach Arabic, namely, enriching vocabulary and cultural knowledge. We can enjoy live Arabic TV broadcasts such as Saudi Arabia, Egypt, Yemen, Palestine, and Abu Dhabi. This Media helps students' listening skills (*maharah istima'*).

3.4.4 Arabic E-learning

The term e-learning contains a comprehensive meaning so that many experts describe the definition of e-learning from various points of view. One definition that is quite acceptable for many parties, such as Darin E. Hartley, stated that e-learning is a type of teaching and learning that allows the delivery of teaching materials to students using the internet or other computer network media. Learn Frame in the Glossary

of-Learning Terms states that a broader definition is that e-learning is an educational system that uses electronic applications to support teaching and learning using the internet, computer networks, and standalone computers. The benefits of media, specifically in learning are:

a) Delivery of learning messages can be more standardized

b) Learning can be more exciting

c) Learning becomes more interactive by applying learning theory

d) Implementation time can be shortened considerably

e) The quality of learning can be improved

f) The learning process can take place whenever and wherever needed

g) Media can foster positive attitudes towards students' learning materials and processes

h) Changing the teaching role towards a more positive and productive one

i) Making methods more varied and learning fun

j) Making students tend to be more active in the learning process [19].

The benefits of learning technology depend on who uses it. Here are some of the benefits of learning technology for teachers and students [20]:

1) Benefits for teachers:

a) Educators can make it easier to achieve educational goals

b) Educators can make learning design easier

c) Educators can support learning methods

d) Educators can further improve the effectiveness of learning

e) Educators find it easier to convey the learning material

f) Educators can streamline time

g) Can be the teaching support of an educator

2) Benefits for students:

a) Students can more quickly absorb the subject matter provided by educators

b) Students receive learning material with pleasure. Students do not quickly feel bored; they are happy and enthusiastic about participating in learning

c) Students are not bored with teacher delivery [20]

Often one of the problems students do not absorb lessons well is the way the teacher is delivered. Teachers are required to be more creative in delivering material. The teacher has to create an exciting class.

Based on the interviews with the Arabic teacher at MTs Sunan Kalijogo Kranding Mojo Kediri, the use of Arabic learning technology development emphasizes more on traditional media and methods due to the limitations of existing facilities. However, teachers also use media in modern technology such as mobile phones, LCDs, and computers. Audio Visual when needed.

The use of technology in learning Arabic at MTs Sunan Kalijogo Kranding Mojo Kediri in printed form are Arabic books, dictionaries, student worksheets, teacher questions, or learning media through pictures and writings related to vocabulary. There is also the use of audio-visual technology in the form of cellphones and LCDs. The teacher must be truly innovative in the learning process. Therefore, Mrs. Indahwati, as an Arabic teacher at MTs Sunan Kalijogo Kranding Mojo Kediri, uses various innovations in the use of technology in teaching Arabic. For example, in mufrodat or qowaid learning, the teacher creates poems or songs related to the material being taught. Before the core learning activities began, the teacher invited students to learn about the previous material. In this way, students do not feel bored during the Arabic learning process.

Teachers sometimes use modern learning technologies such as cellphones, laptops, and LCDs. The teacher also asks students to look for references from the internet, youtube, and google regarding the material being taught. The internet can provide the possibility for teachers to explore information and knowledge related to subjects they expertise.

4. CONCLUSION

The implementation of Arabic learning technology development at MTs Sunan Kalijogo Kranding Mojo Kediri uses hard and soft technology. The soft technology is printed teaching materials, including Arabic books, dictionaries, Student Worksheets (LKS), questions from the teacher, or learning media through pictures and writings related to vocabulary. At the same time, hard technology is in the form of audio-visual by using smartphones, multimedia, internet, and LCD. Besides, the teachers also use a storytelling technique associated with the teacher's pictures containing mufradat related to daily life in both school and students' live environment.

During the Covid-19 pandemic, the use of technology in learning Arabic at MTs Sunan Kalijogo Kranding Mojo Kediri is the teacher asked students to look for references from the internet, youtube, and google regarding the material being taught. The internet provides opportunities for teachers to explore information and knowledge about subjects related to their expertise. By using the internet, teachers will always update their knowledge.

AUTHORS' CONTRIBUTIONS

Ahmad Nurcholis conducted the observation, collected and analyzed the data. Umi Machmudah supports observation and data collection. Budi Harianto also analyses the data and write the paper. All authors contributed to the manuscript revision. All authors approved the final version of the manuscript and agreed to be held accountable for its content.

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