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# Arabic Language Learning Approach Using Smart Technology in Higher Education

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### ABSTRACT

This research aimed to analyze the implementation framework of smart technology in learning Arabic at the Nusantara Islamic University of Bandung. Researchers adopted a mix-method, namely quantitative and qualitative. Quantitative data were obtained from distributing questionnaires from the application of the smart technology used, and qualitative data were obtained from interviews with students studying the Arabic language and literature at the Nusantara Islamic University of Bandung. Quantitative data were analyzed descriptively, namely calculating the percentage of technology use. The results of this study indicate that the use of technology uses smart technology as a teaching and learning tool. The use of smart technology makes learning easier, more interactive, and more effective. Other technologies are used such as social media, and language laboratories with different hardware and software facilities that support learning Arabic. The use of smart technology is overshadowed by positive and negative impacts that must be the main concern of all users.

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### Keyword

Arabic Language Learning; Digital Learning; Learning Management System; Smart Technology

## مستخلص البحث

إن استخدام التكنولوجيا الذكية يجعل التعليم أكثر تقدمًا في التغييرات الإيجابية والحديثة. تم تبني العديد من التقنيات من قبل العديد من المؤسسات التعليمية، بما في ذلك التعليم العالي. يتم حاليًا تطبيق استخدام التكنولوجيا في التعليم العالي في تعلم اللغة العربية بشكل متزايد لتسهيل تطوير اللغة العربية للطلاب. لذلك يهدف هذا البحث إلى تحليل إطار تطبيق التكنولوجيا الذكية في تعليم اللغة العربية في الجامعة نوسانتارا الإسلامية باندونج. اعتمد الباحثون طريقة المزج، وهي الطريقة الكمية والنوعية. تم الحصول على البيانات الكمية من خلال توزيع الاستبيانات من تطبيق التكنولوجيا الذكية المستخدمة، كما تم الحصول على البيانات النوعية من المقابلات مع الطلاب الذين يدرسون اللغة العربية وأدائها في الجامعة نوسانتارا الإسلامية باندونج. تم تحليل البيانات الكمية وصفيًا، أي حساب النسبة المئوية لاستخدام التكنولوجيا. أما نتائج هذا البحث إلى أن استخدام التكنولوجيا يستخدم التكنولوجيا الذكية كأداة التعلم. استخدام التكنولوجيا الذكية يجعل التعليم أسهل وتفاعليًا وفعالًا. أما بالنسبة للتقنيات الأخرى المستخدمة مثل وسائل التواصل الاجتماعي، ومختبر اللغة مع الأجهزة والبرامج الأخرى التي تدعم تعليم اللغة العربية. إن استخدام التكنولوجيا الذكية طغت عليه الآثار الإيجابية والسلبية التي يجب أن تكون الشغل لجميع المستخدمين.

تعليم اللغة العربية؛ تكنولوجيا ذكية؛ تعليم الرقهي؛ نظام إدارة التعليم

كلمات أساسية

## INTRODUCTION

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Technological progress in the era of society 5.0 is a necessity that cannot be avoided. Modern technology is made to make it easier for users to deal with existing situations. This has become part of the human being itself and has had an impact on changing the educational paradigm the disruptive innovation phenomenon has changed the paradigm that is fundamental to conventional learning models (Fox-Turnbull & Snape, 2011). For this reason, it is necessary to renew learning in higher education, such as leaving traditional didactics and creating more meaningful learning.

As a process, educational technology is abstract. In this case, educational technology can be understood as a complex and integrated process that involves people, procedures, ideas, equipment, and organizations to analyze problems, find ways to solve problems, implement, evaluate, and manage solutions to these problems, which cover all aspects of learning (Guggemos & Seufert, 2021). In line with this, the birth of smart technology that is sticking out currently includes equal opportunities to obtain an education, quality improvement, relevance, and efficiency of education. A serious problem that is still felt by education, starting from basic education to higher education, is only certain quality issues; this can be solved through a smart technology approach (Gilbert, 2021).

Smart Technology continues to experience development along with the times. In the implementation of everyday learning, we often encounter the use of technological developments in the world of education (Howard & Howard, 2017). The application of technology in learning activities is marked by the presence of e-learning, in which learning is delivered through all electronic media, such as audio/video, interactive TV, compact disc (CD), and the Internet. Teachers or lecturers often combine technological tools in the learning process (Sharma et al., 2019).

The concept of smart technology has been popularly used in various countries, including educational institutions in Indonesia, which have begun to internalize technology in learning activities. This can be a solution to the defects in traditional education and create learning that is fun and unlimited, but still adheres to the higher education concept, namely the concept of andragogy or adult learning. With this, the urgency of using smart technology has become clear as it achieves learning goals in the present. Moreover, the issue of digital progress is supported by the massive use of technology in every community activity, which is a benchmark for implementing this technology in schools. (Brooks & Kopp, 2014).

Until now, the dynamics of modern life have made many researchers interested in discussing matters related to smart technology. Several previous studies stated that smart technology applications had a positive impact on learning Arabic (Susanto et al., 2022). Artificial intelligence and 5G will become

the most essential things in tertiary institutions, such as the use of the Moodle application in Indonesian language and literature education study programs which is very effective. M-learning has a good and constructive influence on language learning. Likewise, the use of Youtube can increase student interest in learning (Reinhardt, 2020). Integrating mobile apps into language learning can motivate students and make their learning more sustainable and help develop student awareness so they can monitor and plan language learning activities. Thus, it can be concluded that digital language learning can serve as an approach to integrate the cognitive, social, affective, and neural dimensions of second language learning (Iswanto, 2017).

We can apply the increase of technology in this modern era of globalization to every aspect; and some activities are even more difficult to do without technological assistance. Now there is the latest innovation in the form of smart technology which is a technological solution to make life more efficient (Raja & Nagasubramani, 2018). Smart technology has become a trend that can be beneficial for life in carrying out various activities including in the world of education as more and more sophisticated facilities expedite the learning process delivered. Here is the importance of technology to always follow its development (Effendi & Wahidy, 2019). The use of technology is proven to be able to increase children's interest in learning because it looks more attractive; hence, they will not feel bored while attending lessons. In Indonesia, most schools still do not use technology in education.

Besides, acceptance of the values of technology and its effectiveness in language learning is also important, so that the process of learning language using technology produces ideal and independent language learning skills (Golonka et al., 2014). Because the high level of awareness, the diversity of technological tools, and the supporting facilities will be able to make students love the language they are learning more. That way, adequate technological resources are important to maintain a consistent learning experience in various bad situations (Au-Yong-Oliveira et al., 2018). Even so, the use of smartphones in learning contains weaknesses that are identified at different levels, such as inadequate smartphones, internet connectivity problems, the level of readiness of practitioners and students, and the unbalanced development of the four skills (Hung & Yuen, 2010).

From the explanation above, the common thread that needs to be underlined is that the effectiveness of smart technology is influenced by several variables, such as level of education, type of hardware, language ability, target language, advantages of learning L1/L2 languages, awareness, IT infrastructure, and supportive management (Golonka et al., 2014). Therefore, further research is needed regarding the impact of using smart technology in the education sector.

Because with the review of smart technology applications for students, learning Arabic will be created in an effective, communicative, and quality way. There are three crucial things to study, namely the perceptions and attitudes of Arabic Language Education Study Program students regarding the use of smart technology, smart technology integration and the development of digital literacy competencies, and smart technology efforts to help facilitate continuous independent learning.

## **METHOD**

A mixed methods approach was applied in this study. The design was a sequential explanatory design, namely by combining quantitative and qualitative research methods sequentially. The first stage of research was carried out using quantitative methods to measure the use of smart technology in learning Arabic at the Nusanatara Islamic University of Bandung. Data were collected from 120 students, who use smart technology in learning in tertiary institutions. Then, the qualitative data described the impact that affects students' language skills. The sampling technique was a cluster random sampling technique combined with convenience sampling, meaning that samples were taken randomly from several separate groups and were also selected based on the availability of respondents and the ease of obtaining data.

Data collection tools in this study used questionnaires and interviews. Questionnaires were used to collect quantitative data regarding the use of smart technology in learning Arabic. The technology referred to the use of e-learning, video-assisted learning, social media in learning, language laboratory, and other technologies, such as smart classroom-based hardware and software. Interviews were used to collect data of the impact of using this technology on students' language skills. Before the data were collected, the researchers made research instruments that are reviewed by experts in the field of technology. Valid instruments were then adopted using the Google form to make it easier for researchers to disseminate and collect data. The Google form of this instrument is distributed to students as respondents.

Quantitative data were processed by calculating the percentage of data obtained from the questionnaire, then the data were analyzed using quantitative descriptive. While the qualitative data were analyzed using the Miles and Huberman model, namely data reduction by selecting the main data after the they were collected, followed by presenting the data based on the sub-subjects of the research described in the article, and finally drawing conclusions that are become novelties of this research.

## RESULTS & DISCUSSION

### LMS in the Process of Learning Arabic

A learning management system (LMS) is software designed to create, distribute, and manage the delivery of learning content (El Mhouti & Erradi, 2018). This system can help teachers to plan and create learning tools, manage learning materials, manage student learning activities, manage grades, recapitulate student attendance, display grade transcripts, and manage displays. *E-learning* because is based on a digital application. In addition to help lecturers to plan the learning process offline and especially online, LMS also assists students to access learning content from anywhere and anytime (Magdalene & Sridharan, 2018).

The rise of the Covid-19 pandemic which has spread throughout the world including Indonesia has made learning switch to online learning (Almusharraf & Khahro, 2020). The use of LMS is very well utilized by several institutions, both at the school and tertiary levels. Time and space limitations during the pandemic forced government agencies and educational institutions to establish online learning policies. Thus, for a teacher, it is important to know technology as a medium for carrying out learning (Ritonga et al., 2021). LMS is one of the solutions used in many universities which is the object of this research. The use of LMS is also applied to learning Arabic. The results of using LMS are as follows:

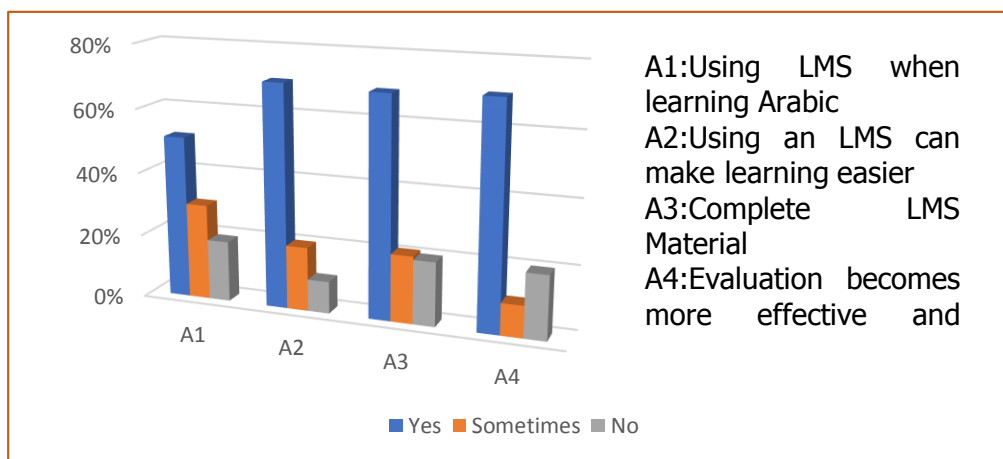


Figure 1. Use of a learning management system

Based on the table data above on the learning management system, the use of LMS has been running for 51% of all respondents who studied Arabic. As many as 30% occasionally use this LMS in learning and another 19% did not use this LMS at all in learning. Nusantara Islamic University of Bandung has socialized lecturers and students to carry out learning using the LMS. LMS is a means for lecturers and students to share and discuss outside the classroom. At class, it is

only enough to discuss material that has been shared and discussed from LMS to make learning effective and efficient.

Using LMS provides many conveniences for students because LMS can be accessed anywhere; students can learn to understand the material without being limited by space and time. As many as 70% think similarly. Only a minority say the LMS does not make learning easier. Limited interaction does not improve language skills much so the effectiveness of language learning is better-done face to face. However, even though there are limitations to interaction, there are other things that make learning using the LMS easier, namely the availability of complete material. Based on the results of the material presented, the lecturer sent it completely, so opening and understanding the material can be done anywhere. The completeness of the material sent by the lecturer is 80%, the lecturer send material from not only one reference, but also many references such as materials in the form of videos, articles, and electronic reading books. As for the evaluation of using the LMS, it really has a significant influence where the evaluation becomes more effective and more efficient. 70% of respondents said the use of LMS for evaluation provides many conveniences for students. However, others said that the LMS made the evaluation ineffective and this evaluation tended to make students commit a lot of fraudulent acts such as cheating and copying friends' assignments. Opportunities that are obtained by students who are not supervised by their lecturers make many students honest in answering the questions given.

### **Social Media-based Arabic Learning**

The use of social media can make it easier in the learning process. Through social media, students can actively be more creative and independent so that the quality of lessons can increase both in terms of knowledge and quality (Aloraini & Cardoso, 2020). Social media can further trigger the quality of students, so that they can take advantage of various kinds of communication and information owned by related media. Some of the media that are already widely used and can be one of the triggers for the quality of students in obtaining information are Facebook, Tiktok, Instagram, Twitter, YouTube, and blogs (Dijck & Poell, 2018). If the utilization is carried out optimally, it can further improve the quality of certain knowledge. However, it must be followed by minimizing the negative impact. The intensity of the use of social media in learning Arabic is as follows:

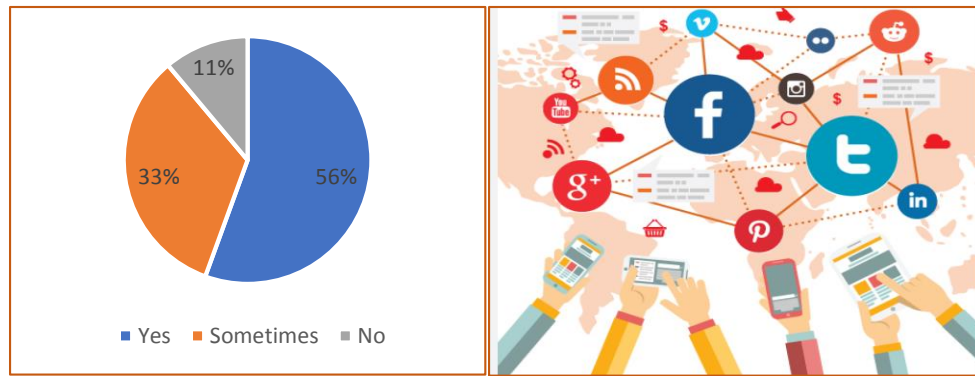


Figure 2. Learning to Use Social Media

Figure 2 shows data obtained from respondents illustrating that in learning Arabic, universities make use of technology that is currently developing and available, such as the use of social media. One of the efficient uses of this technology is to improve the quality of learning or the level of mastery of teaching materials. According to Arifin et al., (2022), learning means changing knowledge and understanding continuously by students through the process of giving meaning to their experiences.

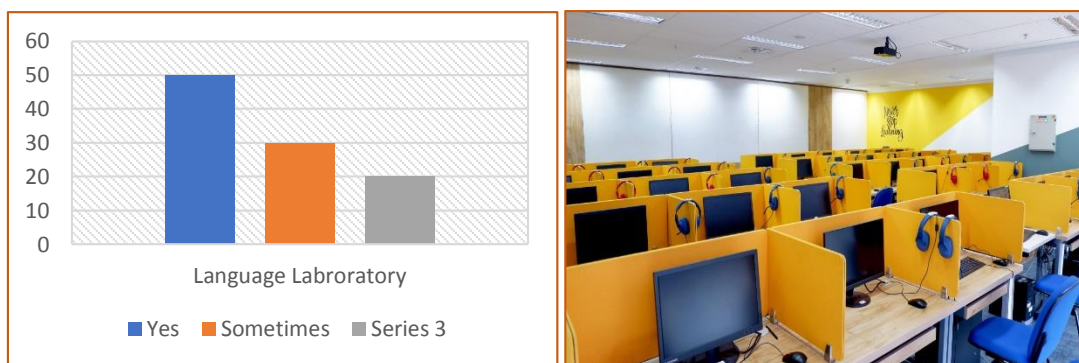
For the intensity of the use of social media technology, 50% of universities use social media in learning. 30% occasionally use social media in learning, and the other 20% do not use social media at all. Based on the data, the social media used was in the form of social media YouTube as a learning tool, Instagram as a means of information, and Whatsapp as a means of discussion. Based on several studies, the use of social media can make it easier in the learning process (Wulandari, 2019). Through social media, students can actively be more creative and independent, so that the quality of lessons can increase both in terms of knowledge and quality. Meanwhile, the way to use social media that can further trigger the quality of students, so that they can take advantage of various kinds of communication and information owned by related media. Several kinds of features that can be utilized in various social media as active learning tools are the use of audio to record sound, record video, and share images and other information (Zachos et al., 2018).

With social media used by students, they can also further expand their network of friends without having to meet in person. It can even be easier to find people who are really needed. Various kinds of online communities, of course, will have a positive impact. Social media can connect all students without being fragmented and they can even establish communication with each other native speaker concerned (Alam et al., 2020). Students can learn a language in a pure and real way and then become engaged so that natural communication knowledge can be formed. The features provided can support in all aspects *maharoh*, *Goodmaharoh kalam*, *istima'*, *kitabah* and *Confession*, even up to

*mufrodat* (Aloraini & Cardoso, 2020).

### Arabic Language Learning Using the Language Lab

The language lab is a useful tool that facilitates classroom engagement and interaction through exercises and computer-based activities to maximize language learning (Setiawan et al., 2018). This laboratory will provide a different experience from the language teaching and learning system that is carried out in ordinary classrooms. Not only that, this language laboratory also offers more sophisticated features and functions. With audio-video and multimedia computer facilities, logically the language laboratory should be able to provide added value to the effectiveness of the Arabic learning process because students can take references from native speakers (Asura Useng, 2018). This is different from learning without a language laboratory where the learner is only presented with the voice of a non-native speaker which is generally still an interlanguage (Kurniati et al., 2019) (Goad & White, 2006). The following is the intensity of using the language lab for learning Arabic:



*Figure 3. The Use of Language Laboratories in Learning Arabic*

It is not surprising that language learning has language laboratory facilities. In learning Arabic, based on a survey using the language laboratory, it is quite widely used, 50% of the learning activities use the language laboratory. And sometimes the language lab is rarely used only for certain subjects such as listening and speaking. In a laboratory room, special lab equipment (in the form of computers, student panels, audio devices, teacher panels, headsets, speakers, etc.) is made to facilitate the delivery of material and understanding of material effectively for students. The language laboratory also functions as a student learning facility for practicing Arabic language skills through practices such as being a host, a reporter, and being a performer in other events to develop students' language skills (Prihartini & Wahyudi, 2018). Complete facilities make students feel more like learning in the language laboratory than in the classroom. However, the use of this language laboratory is only for certain subjects in languages such as practicing speaking, listening, and other practical skills.



Several studies also support that learning a language, especially Arabic, is not enough just with theory; practice is needed as well. To get practical language training, the language laboratory provides exercises in an entertaining and interactive way for the four main language skills: listening, speaking, reading, and writing (Redkin & Bernikova, 2016). The Arabic language laboratory allows students to practice the language with a wider range of activities and exercises based on computers. The Arabic language laboratory also encourages student-teacher and fellow-student communication through activities and exercises that are essential for spoken communication and language comprehension.

From the overall results and discussion, digital technology in learning Arabic is currently much utilized by students and educators. This utilization has been used as much as possible by parties related to the smooth process of learning Indonesian. Given that Arabic is a foreign language and an international language that must be learned and preserved properly and correctly. Due to the development of an increasingly modern and sophisticated era, all learning tools and applications will continue to be used and will continue to be developed by educators and students.

## CONCLUSIONS

The use of smart technology in learning has a significant impact on the quality of learning. Observing the results smart technology in learning has been widely used in teaching Arabic, especially in universities. The intensity of smart technology use reaches 70%; both teachers and students actively participate in using smart technology. The use of smart technology has a significantly positive effect where learning is more effective and efficient, not limited by space and time. Apart from that, smart technology provides great opportunities for students to be able to do many things besides studying in class. Social media belong to some technologies that are very helpful as a learning tool. Not only does it serve as a means of communication, but social media is also a means of learning information for students. Various interesting lessons that can be accessed on social media provide space for students to gain a deeper understanding of the learning material. Utilizing laboratory facilities, as well as hardware and software supports better classroom learning. Even so, learning technology leaves negative impacts that must be avoided such as the erosion of communication manners among students and between students and teachers, the formation of student individuality, and the security of data stored on the internet.

However, from some of the technologies above, of course, this research cannot provide more information about how and the effectiveness of using these technologies. Thus, the researcher recommends that further researchers

measure and see how influential it is and how it is implemented in the classroom. Thus, it can make this research a continuous and complete research. Other researchers can also see the other side besides the use of technology, such as learning models, methods, strategies, and other interesting learning components.

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