IMPLEMENTATION OF VCDLN-LEARNING MULTIPLATFORM THROUGH MOBILE COMMUNICATION BASED ON ARTIFICIAL INTELLIGENCE IN ASIA

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ABSTRACT

Purpose: This research is a continuation of the previous year, namely 2022, which functions to implement VCDLN through Mobile Communication-based TVUPI media which uses Android Mobile Phones in building a distance learning system in Asia. In doing so, it is carried out based on the work of Artificial Intelligence (AI).

Method: This research uses the Research and Development method through the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). Specifically, implementation involves assessments from teachers from Indonesia, Japan, and South Korea. Meanwhile, evaluation indicators use indicators from AI expert.

Result and Conclusion: In addition, the opinions of educators from South Korea Japan, and Indonesia support the expansion of VCDLN-Learning through Mobile Communication Based on AI services to other countries. Three aspects of the AI Framework tend to get high scores, namely the Deep Learning aspect with scores of 185, 187, and 189. Then the Robotics aspect with scores of 187, 192, and 195, and the Neural Network aspect with scores of 192,196 and 198 from a maximum score of 200.

Implementation of The Research: This finding is reinforced by the thought of AI experts that the VCDLN innovation applies the framework of AI, especially in building mobile communication and fast access automation systems from Big Data for Mobile VCDLN-learning in Learning Services.

Originality/Value: This research contributes to existing literature regarding Virtual Community Digital Learning, Television Technology, media, and digital applications regarding mobile communication. Strengthening the contribution of theories about Artificial Intelligence technology to Digital Mobile Communications in Asia.

Keywords: Multiplatform Android, Mobile Communication, VCDLN-TVUPI, Artificial Intelligence, Distance Learning.

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IMPLEMENTAÇÃO DA MULTIPLATAFORMA VCDLN-LEARNING POR MEIO DE COMUNICAÇÃO MÓVEL BASEADA EM INTELIGÊNCIA ARTIFICIAL NA ÁSIA

RESUMO

Objetivo: Esta investigação é uma continuação do ano anterior, nomeadamente 2022, que funciona para implementar VCDLN através de meios TVUPI baseados em comunicação móvel que utilizam telemóveis Android na construção de um sistema de ensino à distância na Ásia. Ao fazê-lo, é realizado com base no trabalho da Inteligência Artificial (IA).


Resultado e Conclusão: Além disso, as opiniões de educadores da Coreia do Sul, Japão e Indonésia apoiaram a expansão do VCDLN através de comunicação móvel baseada em serviços de IA para outros países. Três aspectos do AI Framework tiveram pontuações altas, nomeadamente o aspecto Deep Learning com pontuações de 185, 187 e 189. Em seguida, o aspecto Robótica com pontuações de 187, 192 e 195, e o aspecto Rede Neural com pontuações de 192,196 e 198 de uma pontuação máxima de 200.

Implementação da Pesquisa: Esta descoberta é reforçada pelo pensamento dos especialistas em IA de que a inovação VCDLN aplica a estrutura da IA, especialmente na construção de comunicação móvel e sistemas de automação de acesso rápido de Big Data para aprendizagem móvel VCDLN em Serviços de Aprendizagem.

Originalidade/Valor: Esta pesquisa contribui para a literatura existente sobre Aprendizagem Digital em Comunidades Virtuais, Tecnologia de Televisão, mídia e aplicações digitais relacionadas à comunicação móvel. Fortalecer a contribuição das teorias sobre a tecnologia de Inteligência Artificial para as Comunicações Móveis Digitais na Ásia.


IMPLEMENTACIÓN DE MULTIPLATAFORMA VCDLN-LEARNING A TRAVÉS DE COMUNICACIÓN MÓVIL BASADA EN INTELIGENCIA ARTIFICIAL EN ASIA

RESUMEN

Propósito: Esta investigación es una continuación del año anterior, es decir, 2022, que funciona para implementar VCDLN a través de medios TVUPI basados en comunicaciones móviles que utilizan teléfonos móviles con Android para construir un sistema de aprendizaje a distancia en Asia. Para ello, se lleva a cabo basándose en el trabajo de la Inteligencia Artificial (IA).


Resultado y conclusión: Además, las opiniones de educadores de Corea del Sur, Japón e Indonesia apoyan la expansión del aprendizaje VCDLN a través de comunicaciones móviles basadas en servicios de IA a otros países. Tres aspectos del marco de IA tienden a obtener puntuaciones altas, a saber, el aspecto de aprendizaje profundo con puntuaciones de 185, 187 y 189. Luego, el aspecto de robótica con puntuaciones de 187, 192 y 195, y el aspecto de red neuronal con puntuaciones de 192,196 y 198 de una puntuación máxima de 200.

Implementación de la investigación: Este hallazgo se ve reforzado por la idea de los expertos en IA de que la innovación VCDLN aplica el marco de la IA, especialmente en la construcción de comunicaciones móviles y sistemas de automatización de acceso rápido a partir de Big Data para el aprendizaje VCDLN móvil en servicios de aprendizaje.
Implementation of VCDLN-Learning Multiplatform Through Mobile Communication Based on Artificial Intelligence in Asia

Originalidad/Valor: Esta investigación contribuye a la literatura existente sobre el aprendizaje digital en comunidad virtual, la tecnología televisiva, los medios y las aplicaciones digitales relacionadas con la comunicación móvil. Fortalecimiento de la contribución de las teorías sobre la tecnología de Inteligencia Artificial a las Comunicaciones Móviles Digitales en Asia.

Palabras clave: Android Multiplataforma, Comunicación Móvil, VCDLN-TVUPI, Inteligencia Artificial, Educación a Distancia.

The research was motivated by the research product in 2020-2021 about VCDLN-TVUPI being sustained that sustained strain. This utilization process requires a new system oriented towards the Multiplatform Super-App Ecosystem in 202a 2 with a focus on the ring of Survey, Application Design, Development, and production, whose impact is then measured with several indicators for online learning systems(Scherer et al., 2019). In the era of the Pandemic over the last two years, it has become a driving force in the birth of several innovations, including in communication and education, such as in Indonesia (Amponsah et al., 2021). As a product oriented toward mobile technology, the development of VCDLN-Learning is built by adopting an Artificial Intelligence work system(Chatterjee, 2020). This innovation from VCDLN is essential to be able to take advantage of Big Data (Chatterjee, 2020);(Charles et al., 2018), which is related to fulfilling the convenience of learning resources and teachers in the Database that has been built by the Ministry of Education and through its Dapodik, as well as by the research team in an online database, namely on the website vcdn-l-tvupi.com (2021). The following are the objectives of the research that have been achieved, namely: (1) Designing and development of the Database Central to support the implementation of TVUPI'S VCDLN-Learning Multiplatform Super-App as Mobile Communication through Artificial Intelligence Framework; (2) Network Model for Generate Learning Content VCDLN-TVUPI Database online to Mobile Super-App TVUPI/VCDLN-Learning based on Android System; (3) Implementing mobile distance learning services through the Android-based TVUPI'S VCDLN-learning Application for teachers in South Korea, Japan, and Indonesia; (4) Measuring of implementing the Mobile Distance Learning Services through the TVUPI'S VCDLN-learning Ecosystem Multiplatform Super-App Mobile Communication in Indonesia, Japan, and Korea; and (5) Controlling the quality of service and access speed of the TVUPI'S VCDLN-learning...
Ecosystem Multiplatform Super-App Mobile Communication through an Artificial Intelligence approach by an Expert.

2 THEORETICAL REVIEW

As discussed in the introduction, several innovations have sprung up and can unconsciously cultivate "Culture Education Practices." For example, the Google Trends Indonesia (2020) analysis has so far recorded that 34% of the consultation process in education services is carried out online, and the practice of education has reached 33% (Online Education Course, Mc Kinsey & Company, 2020).

2.1 REGULATION AND QUALITY CONTROL OF VCDLN

Regulations for holding VCDLN can be adopted from 2003 to 2012. For example, on Regulation of Higher Education Research and Technology No 50/2015 concerning Distance learning and E-learning. Until the 2018 government policy with the birth of Chapter 11 Paragraph 9 Regulation of Higher Education Research and Technology No. 51/2018: Distance Education, after this abbreviated as open distance learning the teaching and learning processes carried out remotely through the use of various communication media. On April 3, 2020, in the conditions of the COVID-19 pandemic, it was as if the new Ministry of Education and Culture had been entrusted with a strategic legacy of the ultimate weapon in maintaining the education and learning process so that it continues. One of the 5 Ministry of Education and Culture policies includes appealing to all primary education institutions to higher education institutions to make partnerships in obtaining several platform support for providing online and digital learning systems. On May 18, 2020, the Ministry of Education and Culture issued Circular Letter Number 15 of 2020 concerning Guidelines for Implementing Home Learning in an Emergency for the Spread of Corona Virus Disease (COVID-19).

Suppose you examine the New Normal condition as stated by the President of the Republic of Indonesia on May 15, 2020, which is regulated in Phase III. In that case, it is noted that "Educational Activities in Schools are carried out using the Shift system according to the number of classes." However, this will risk the spread of COVID-19; at least, VCDLN can still be done by implementing regulations regarding "Blended Learning" (Tempo. co & World Health Organization, 2020). This is at least the Indonesian nation has followed the appeal from WHO and observed the experiences of European countries that have already implemented the
"New Normal" in the practice of education services (Tempo.co and World Health Organization, 2020). According to the existing regulations, learning can be done at school for three days and at home for two days, plus two days (Saturday and Sunday) can be used for Quality Control (QA) from VCDLN with the parents of students. This condition supports Regulation No. 4 of 2020 from the Ministry of Education and Culture.

2.2 VCDLN BASED ON TELEVISION PROGRAM

As discussed in the review of the Regulation on VCDLN section above, the latest regulations and demands return to normal in new conditions, and the implementation of VCDLN must be aligned with the New Normal Regulation (Tempo.com, 2020). Researchers remember from one of the studies regarding the level of digital skills or literacy owned by the millennial generation or the Z-generation, where they could design digital learning information system lines in several universities (Suryadi, 2019). If analyzed from the Regulation from the Ministry of Education and Culture of the Republic of Indonesia as policy regarding the targets of implementing complete online long-distance learning at that time, it is confirmed that it will produce 80% (Culture, 2018), and regulation No. 24 of 2012 concerning Distance Education, the success of education that touches all corners of the archipelago. Thus, if only 20% is left, then through Blended Learning Television as one of the VCDLN models in the corridor of learning in schools during the "New Normal," it is possible to produce 100% of the target learning services announced according to the policy.

This innovation is conducted to Regulation Letter 15 of 2020 Concerning Guidelines for Organizing Learning from Home in an Emergency Period of the Spread of Corona Virus Disease (COVID-19) through conduct with the (Ministry of Education and Culture, 2013). Regulation No. 51/2018, in Indonesia's Distance Learning & Online Learning Milestones section. When the initiators of the VCDLN Community in remote areas included educators who did face-to-face in the context of learning communication through mobile digital television, the atmosphere built during their meeting will be a forum for exchanging experiences or collaborating to design the preparation and development of VCDLN learning content when they carry out inter-community learning services. Gradually the production of online teaching materials to create a Virtual Community Digital Learning Nusantara can be facilitated through TVUPI's LCJ access for dissemination to remote areas of the country.
3 RESEARCH METHOD

The research method is used as a plan for how a study is carried out. To be able to answer all the research problems, formulations have been used from Development (R&D) research (Borg, W. R., & Gall, 1971) through the ADDIE Model (Carr, 2022).

**Figure 1**

*Research Design*

<table>
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3.1 RESEARCH INSTRUMENT

The research instruments in the form of a questionnaire and test are used in this study. This questionnaire aims to get feedback and opinions from the research subject and the expert regarding user satisfaction and effectiveness of "Mobile Super-App TVUPITS VCDLN-Learning Based on Artificial Intelligence."
3.2 RESEARCH SUBJECT

The study subjects are teacher professionals from 9 districts and teacher delegation from the District Education Office. For the sample, the selection is made randomly or by random area sampling. Creswell (2009) suggests that researchers can use existing distance learning TVUPI'S VCDLN-Learning in experimental research.

3.3 DATA ANALYSIS

This research used the mixed method (Qualitative and Quantitative). The Qualitative Stage is needed when the team builds a "Mobile Super-App TVUPI'S VCDLN-Learning Based on artificial Intelligence" for Distance Learning Education Practices as one variant through VCDLN-Learning. Then qualitative is also used in the process of developing several Teachers professionals when there are uses all content of TVUPI'S VCDLN-Learning through Mobile Super- App (Rahadian et al., 2020); researchers will apply it when recognizing the speed of delivery of learning material, the effect of the Suer-App Mobile TVUPI'S VCDLN-Learning Based on Artificial Intelligence system for support of all skill level of teachers, as well as the influence of both on acceleration and changes in results, the analysis uses the Descriptive analysis.

4 RESULTS AND DISCUSSION

4.1 NEEDS ANALYSIS FOR THE MODEL DESIGN TO DEVELOP DATABASE TVUPI'S VCDLN-LEARNING AS MOBILE COMMUNICATION BASED ON AI FRAMEWORK

In this research series, polls were produced for 18 City District Education Offices in Nusantara, which had received research products in the form of the Super-App Mobile VCDLN-Learning application. To meet the needs of a more democratic learning system that can be used anytime and anywhere. Of course, the development steps taken must consider the quality of the content and the pedagogical aspects of learning regarding research (Bai & Stede, 2022). Based on this, the following are the results of a survey conducted on teachers in 18 districts and cities in Indonesia. The results of this survey can be seen below in Figure 3.
Eighteen regencies and cities in West Java province indicate that teachers expect massive development of the VCDLN-Learning platform, with the number of opinions moving from 3.284 to 4.345 people. This opinion is very high and has become the basis for this research to develop a Super-App Mobile VCDLN-Learning platform that can meet the expectations of 3245 teachers. This finding will be the basis for developing the Super-App Mobile VCDLN-Learning. The results of this study are the following personal (Olsen et al., 2021).

4.2 NETWORK MODEL FOR GENERATE LEARNING CONTENT VCDLN-TVUPI DATABASE ONLINE FOR MOBILE COMMUNICATION BASED ON ANDROID SYSTEM THROUGH AI FRAMEWORK

Some essential elements in implementing VCDLN can be analyzed in a flashback regarding several terms and objects or target subjects we often call and use in educational practice. For example, software, hardware, brain ware, and environmental ware are used. Likewise, in the analysis, a new concept or model may soon be put into practice in the paradigm of system service implementation and education and learning communication strategy, which the author named VCDLN, where the results of the analysis of these elements can be seen in the following chart.
Figure 3

Construct of VCDLN-Learning Based on Artificial Intelligence Through Circle Network

Figure 3 above shows that the development of VCDLN research applications, which have been carried out for the last two years, is supported by several relevant theoretical studies. The first study is regarding regulations from the Ministry of Education and Culture in 2018th, during COVID-19, to the policy on Distance Learning according to the current rules in force in 2020. The second theoretical study is about the program from the Directorate General of Higher Education Research and Technology regarding Matching Fund-Kedaireka in 2020. The program supported the third theory on predictions and elements from the VCDLN version of the Indonesian Educational Technology Association in 2022. The following critical study is the study of Artificial intelligence from Stuart Russel & Peter Norvig in 2022, wherein the field of education, this AI framework has been made a real contribution to all solutions to problems in teaching and learning (Porayska-Pomsta, 2016). Finally, what about the theory of Big Data, mainly what is being studied by Digital Ocean in LLC in 2022 in its study of Velocity and Variety? This statement is conducted by (Eissa et al., 2022).

This finding aligns with the convenience aspect of online learning, as explained in two supporting studies (Cukurova et al., 2020). As a result, the learning process presents a one-way characteristic, and the teaching staff has difficulty controlling the teaching process. In this condition, the lack of communication between teachers and students. The result hinders the further development of online learning (Fan et al., 2021). To maximize the advantages of online learning, it has become more and more critical to explore the factors that affect the results of online learning. The visual and complete design of the multiplatform Super-App VCDLN-Learning is a reference in the program of service activities and subsequent system development.
(Rodríguez-López, 2021) where all stages of development are adjusted to the ease of respect from the survey results to teachers in Indonesia.

4.3 IMPLEMENTING MOBILE COMMUNICATION SERVICES THROUGH THE ANDROID-BASED VCDLN-LEARNING APPLICATION FOR TEACHERS IN SOUTH KOREA, JAPAN, AND INDONESIA

From the products produced in the previous stages, the implementation of learning through the Mobile Communication for Learning application is in the form of TVUPI'S VCDLN-learning which can be seen in the image below.

Figure 4
Visual model of Applied Artificial Intelligence Framework for developing super-app Mobile Communication for VCDLN-Learning

Figure 4 shows that the program of this creation seeks to provide innovative services in the television and telecommunications industry to support the quality of education services in all conditions. Several shows are produced and are learning content that students can access and watch anytime, anywhere. For example, this product can be accessed by teachers in Japan, South Korea, and Indonesia in remote corners of the archipelago. Thus, we present a brief description of the Copyright; hopefully, it can support government programs in realizing equitable access and governance and the quality of education from the center to remote areas of the country.
The Android-based VCDLN TVUPI learning application was developed through an Artificial Intelligence Framework which includes principles from Machine Learning, Deep Learning, NLP, Computer Vision, Expert Systems, and Neural Networks. The current learning resources database address has been provided on the https://vcdlnlearning.com page. Teachers and students can use their mobile phones to view and study the required teaching materials from that page. Every feature designed and then developed with access instructions can automatically call up the display of video content desired by the user to conduct or support by database vcdln-tvupi.com as Big Data Learning Resources. This innovation in the design of the Super-App mobile system (Hallberg et al., 2020) application is expected to be a program that is easier and faster to use by teachers in Indonesia. Furthermore, the results of this design are further developed for the needs of multiplatform services connected to the content database website at https://vcdlnlearning.com. This need is intended to realize the initial concept of a multiplatform program, according to (Models et al., 2010). This effort is carried out in the next step for conducting open-distance learning (Villa-Martinez, 2019).

4.4 MEASURING IMPLEMENTING THE MOBILE DISTANCE LEARNING SERVICES BASED ON MOBILE COMMUNICATION THROUGH AI FRAMEWORK IN ASIA

The product of this research was the TVUPI’s VCDLN-learning Ecosystem Multiplatform Super-App based on Mobile Communication through AI framework, which is intended to utilize Big Data for Mobile communication and distance learning resources (Faller & Höftmann, 2018) and then tested by samples from South Korea, Japan, and Indonesia. The measurement score maximum of 200 from respondents to evaluate the indicators of measurement of implementing the seventh framework of AI. All results of measurement of implementation from this research have been conducted from other research (Sottilare, Shawn Burke, et al., 2018); (Alshehri et al., 2021). The results of the second round the measurement process can be seen below.
Figure 5

Result of Measuring The Second Ronde Measurement of Implementation VCDLN-Learning Based on Mobile Communication Through AI Framework in Asia

Figure 5 above shows that the results of the assessment of the implementation of research products on VCDLN-Learning using Mobile Communication and supported by AI with the seven frameworks that were measured showed dynamic results in three countries in this Asian region. From the Machine learning aspect, the measurement results from three countries in Asia, namely Indonesia, Japan, and South Korea, are in the quite good category, respectively, the score achieved by Indonesia was 185, Japan 187, and South Korea 189 out of a total score of 200. The scores achieved for this aspect of Deep Learning, the scores achieved by Asian countries were respectively Indonesia at 187, Japan at 189 and South Korea at 192. The next measurement results for the NLP aspect, Indonesia reached a score of 189, South Korea reached 187 and the highest was Japan at 189. The next measurement results are the Computer Vision aspect, achieved by Indonesia at 185, and South Korea at 192. Furthermore, for the measurement of the Robotics aspect, Indonesia's achievement was 192, while South Korea only achieved 187, the highest achievement was Japan at 195. As for the other AI framework measurement, Expert System, score South Korea achieved the highest score of 195, Japan achieved a score of 185 and Indonesia achieved a score of 188, while Japan only achieved 185. As for the final AI framework, namely Neural Network, Indonesia achieved a score of 192, Japan achieved 196 and South Korea achieved 195. All The results of this measurement are aimed at research products regarding the Implementation of VCDLN-Multiplatform
Learning via Mobile Communication. In practice, educators and students do this using mobile phones for distance learning with the support of the online database vcdn-tvupi.com.

The results of measuring the application of research products to teachers who are representatives of the three countries show that the research product in the form of Controlling the quality of service and access speed of the TVUPI'S VCDLN-learning through an Artificial Intelligence Framework has been completely assessed. As for the assessment indicators for the seven frameworks that were surveyed for all responses with a maximum score of 200 points, the result is that aspects of Machine Learning (Pagano et al., 2023); (Svennevik et al., 2021), Deep Learning (Bidwe et al., 2022), NLP (Dora & Kasabov, 2021) and Robotics (Chotikunnan et al., 2023) are quite in demand and have been reflected in the application system of this research product.

4.5 CONTROLLING THE QUALITY OF TVUPI'S VCDLN-LEARNING MULTIPLATFORM MOBILE COMMUNICATION THROUGH AN AI EXPERT.

Several learning contents, especially in the form of learning videos from educators for all levels of education, have been stored in the VCDLN-TVUPI Database. This Database is getting bigger and can be said to be Big data which will provide convenience for educators and students who study using the Super-App Mobile VCDLN-Learning application (Cukurova et al., 2020). In addition, this Database now contains 365 Learning Videos as Big Data for implementation result research (Eissa et al., 2022). Existing content is processed and verified through an online digital system using industry-standard instruments. Efforts to verify industry standard content are aimed at two aspects, namely, the element of display quality and also the scope and sequence of the material presented (Dimitrova & Mitrovic, 2022). In addition, there are also interactive aspects, speed, and ease of access. As a visualization, it can be seen in Figure 9 below.
Quality is measured for each aspect, from the quality control process to the convenience and excellence in implementing research products. The quality indicators are measured using references which include (1) Speed Access; (2) User-Friendly; (3) Digital Literate, and (4) Content Enrichment. The results of the four assessments show that all four support the management and utilization of Big Data (Alfalqi & Bellaiche, 2022) needed in education services supported by the principle of Mobile learning (Clemmer, 2012) with the results of artificial intelligence produced by teachers according to their respective frameworks.

Big Data, an online digital learning resource built on a database with the access address http://vcdln-tvupi.com, will be a real contribution to the speed of access to applications constructed through an expert system or Artificial Intelligence by the research team. Figure 6 above shows that educators and students can use this innovation as a concrete form that the Super-App Mobile VCDLN-Learning helps them learn anywhere and anytime. To utilize and disseminate services, the VCDLN-Learning super-app can be downloaded and accessed for free on the Android application by Accessing the address https://vcdlnlearning.com.

This product impacts the quality of being user-friendly, which can build an ecosystem among users, both teachers and lecturers (Yan et al., 2021);( Kurdi et al., 2020). Some educators from other countries will need it and are expected to become members of this VCDLN community, as has been researched by (Marras et al., 2022) and Holmes et al., 2022). These findings will allow UNESCO to realize efforts to increase digital competence, as
emphasized in its research (Salazar et al., 2021). The research findings show that the process of generating or withdrawing learning content data from a database that has been developed is an implementation of the working principle of Artificial Intelligence (Porayska-Pomsta, 2016). Where the Super-App Mobile VCDLN-Learning work system developed can carry out the interaction process automatically through the Android work system and existing website technology, both from the Big Data through http://vcdln-tvupi.com and http://vcdlnlearning.com website.

5 CONCLUSION

From the findings and discussion in this study, several results can be concluded, which include a survey of 18 TVUPI Studios and 4,345 teachers in the Nusantara regarding the need for TVUPI's VCDLN-learning Ecosystem Multiplatform Super-App Mobile Communication through Artificial Intelligence for educational services. The second round of measurement to evaluate the implementation of all research products was supported by samples from Indonesia, Japan, and South Korea. The research findings further produced an AI construction to support the VCDLN database work system from five points of view of reference sources and national and international programs as a circle network. In its implementation, VCDLN-learning has used Android mobile application support which was developed in version 1.1 which makes it easy for teachers and students to download, install, and carry out learning interactions anywhere and anytime independently. During the implementation of the VCDLN-Learning program as a research product used by teachers from Indonesia, Japan, and South Korea. The evaluation showed that there were interesting score dynamics from the seven aspects of the AI framework. These differences can be seen in the aspects of Machine Learning, Deep Learning, NLP, Computer vision, Robotics, Expert Systems, and Neural Networks. Where the three aspects of the AI Framework tend to get high scores, namely the Deep Learning aspect with scores of 185, 187, and 189. Then the Robotics aspect with scores of 187, 192, and 195, and the Neural Network aspect with scores of 192,196 and 198 from a maximum score of 200. Overall, the measurement results from the three countries in Asia for the seven aspects of the AI framework reached an average of between 438 and 444. From the latest findings of this research, it is recommended that Quality Control be visualized in Figure 5 with the name Visual of The Second Ronde Measurement of Implementation VCDLN-Learning Based on Mobile Communication Through AI Framework in Asia, this effort ensures that the minimum
score obtained by teachers will utilize the VCDLN-Learning system based on Mobile Learning Through AI framework in several other countries to reach a score of 184.

REFERENCES


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