Transformasi: Jurnal Pengabdian Masyarakat, 20 (2), 2024: 464-473
p-ISSN 1858-3571 | e-ISSN 2580-9628

ANDROID-BASED MATHEMATICS LEARNING TO INCREASE STUDENT INTEREST: A LEARNING INNOVATION AT A COMMUNITY LEARNING CENTRE IN SAMARINDA CITY

Ikmawati[1]*, Ariantje Dimpudus[1], Usfandi Haryaka[1], Kevin Ely Asar Greas[1], Muhammad Ramadani[1], Yeisha Lorry Ega Pakpahan[1], Nur Insan Ramadhani[1]
[1]Universitas Mulawarman, Samarinda, Indonesia
*ikmawati@fkip.unmul.ac.id

Abstrak: Salah satu masalah utama yang sering dihadapi oleh Pusat Kegiatan Belajar Masyarakat (PKBM) di kota Samarinda adalah rendahnya minat belajar peserta didik. Beberapa faktor yang mempengaruhi hal ini antara lain kurangnya motivasi pribadi, materi yang dianggap membosankan atau tidak relevan, serta ketidaksesuaian antara metode pembelajaran dengan kebutuhan dan minat peserta didik menjadi penghambat utama dalam meningkatkan kualitas pembelajaran di PKBM. Program Pengabdian Kepada Masyarakat (PkM) ini bertujuan meningkatkan minat belajar matematika dan memperkenalkan kepada peserta didik cara-cara baru dalam memperoleh pengetahuan yang lebih modern dan sesuai dengan perkembangan zaman. Dengan menggunakan media berbasis Android dapat menciptakan metode pembelajaran yang lebih interaktif, menyenangkan, dan memotivasi peserta didik untuk lebih aktif. Metode yang digunakan adalah jenis penelitian deskriptif yang menggambarkan kegiatan PkM dalam bentuk pendampingan penggunaan teknologi pendidikan, berupa aplikasi mobile atau platform pembelajaran online yang mudah diakses oleh siswa, media belajar yang dapat diakses di handphone android khusus pembelajaran matematika. Pelaksanaan PkM ini disajikan dengan pendekatan inovatif, menggabungkan pembelajaran menarik dan motivasi inspiratif, baik dari segi materi maupun kisah nyata. Terdiri dari 3 tahapan yaitu persiapan, pelaksanaan dan evaluasi. Hasil pengabdian menunjukkan bahwa program pengabdian melalui inovasi media pembelajaran matematika berbasis Android dapat mendorong minat belajar peserta kejar paket C pada PKBM di kota Samarinda.

Kata Kunci: Kejar Paket C, media belajar, Android, minat belajar

Abstract: One of the main problems Community Learning Activity Centers (CLAC) often face in Samarinda is students' low interest in learning. Several factors that influence this include a lack of personal motivation, material considered boring or irrelevant, and a mismatch between learning methods and students' needs and interests, which are the main obstacles to improving the quality of learning at CLAC. This Community Service (CS) program aims to increase interest in learning mathematics and introduce students to new ways of acquiring more modern knowledge in line with current developments. Using Android-based media can create learning methods that are more interactive and fun and can motivate students to be more active. The method used is a type of descriptive research that describes PkM activities in the form of assistance in the use of educational technology, in the form of mobile applications or online learning platforms that are easily accessed by students, learning media that can be accessed on Android cellphones specifically for mathematics learning. This community service consists of three stages: preparation, implementation, and evaluation. The implementation of CS is presented with an innovative approach, combining engaging learning and inspiring motivation regarding material and real stories. The results show that the community service program through Android-based mathematics learning innovations encourages students' learning interest in the Paket C equivalency program at PKBM in Samarinda City.

Keywords: Paket C equivalency program, learning media, Android, learning interest

Introduction

Many students frequently perceive mathematics as a challenging and monotonous subject, leading to a diminished interest in learning the discipline, particularly among those in the junior high and high school age group. A significant challenge for educators is transforming

this perception by making mathematics more enjoyable and comprehensible for students. As a non-formal educational institution, the Community Learning Activity Center (CLAC) in Samarinda City has an important role in providing additional learning for the community, including mathematics. However, the limited resources and learning methods often make mathematics learning at CLAC less effective in attracting student interest. Many students who pursue package C only study as a formality to get a diploma (Himmi et al., 2021). CLAC is a level of education outside formal schools managed by individuals or groups. The existence of CLAC has been stated in Law of the Republic of Indonesia No. 23 of 2003, where SPN, in article 26. CLAC is an educational unit outside of formal schools that helps students who do not attend or drop out of school continue their education (Rahmawati et al., 2022).

School dropouts can attend non-formal educational institutions included in the A, B, and C package pursuits. The goals are the same or equivalent to formal education (Danial & Usman, 2021). From the survey results conducted in interviews with CLAC organizers in January 2024, information was obtained that students pursuing packages A, B, and C had difficulty learning the lessons, especially mathematics. Mathematics is considered a subject that requires high-level thinking that is difficult to learn through material or lectures alone (Hayati dkk., 2023). In addition to the CLAC organizers, interviews were also conducted with student representatives. They had difficulty understanding mathematics lessons because the concept was tricky, so high-level thinking was required. Another factor is the lack of teaching aids that can motivate students while learning. Another obstacle is that some students work, causing their time to study to be reduced. Students lack knowledge of how to solve problems related to mathematics material. From the results obtained by Susanti & Maharani (2016), where CS was taught through tutoring, 85% of students were more responsive or mastered mathematics if they related it to everyday life. CS, which is positive in nature, will receive support from various parties because the activities carried out are according to the needs of partners with assistance. Students also participate enthusiastically in the activities (Agustina et al., 2019).

It is essential to instil in children from an early age that they learn and introduce mathematics, which can start from the family environment, which is the first environment for children. Introducing mathematics to children from an early age is critical to providing them with a proper foundation of knowledge when learning higher mathematics (Ikmawati et al., 2022). Lessons Mathematics has a value of difficulty and abstract material where different steps and strategies are needed from other lessons. Considering the objectives of the complex mathematics lesson, developing specific media or teaching aids is essential. Use of media In delivering mathematical material, it can be obtained from objects or certain media, a teacher's work that can be done with students (Ikmawati et al., 2023). This step is a form of learning innovation and an innovative approach to education, leading to a better learning process (Faishol et al., 2021). If students master the basics of mathematics, they can efficiently work on mathematical problems related to their daily lives (Rawa dkk., 2021). The guidance of fathers and mothers at home is also essential to provide motivation and can impact children, especially during learning (Lismayanti et al., 2021).

The advancement of technology enables the implementation of Android-based learning

media as an effective solution. As a platform with extensive accessibility and broad reach, Android offers a range of applications designed to improve learning effectiveness. With its interactive and engaging features, Android-based learning media can effectively increase interest in learning mathematics at CLAC (Dewi et al., 2023). Android-based applications are expected to stimulate students' creativity and make it easier to understand previously complex mathematical concepts (Nurkholis, 2013).

Based on this background, this CS seeks to develop and implement mathematics learning innovations based on Android media in LAC Samarinda City. Therefore, this community service program aims to provide motivation and assistance in learning, especially mathematics lessons, so they can compete with students who attend formal schools after graduating from package C. It is hoped that through the use of this technology, students will be more motivated and interested. To learn mathematics and gain a deeper understanding of the material being taught. Thus, it is hoped that this innovation can make a positive contribution to improving the quality of mathematics learning at CLAC and building a learning culture that is more enjoyable for the community.

Method

This study employed a descriptive research design. Fitriyani et al. (2022) stated that descriptive research is usually carried out by collecting data through various techniques, such as observation, interviews, questionnaires, or documentation studies, and then the data is analyzed to produce a detailed description of the research subject. The subjects used in this activity were 25 students pursuing package C at CLAC Mahakan Jaya located in Sungai Pinang Luar Village, Samarinda City, with an age range of 15 to 21 years with an average family background from middle to lower economic levels, some of the students had to work and help the family economy.

The initial step of this community service programme was the preparation stage, which was achieved through interviews with administrators, tutors, and student representatives of PKBM Mahakam Jaya. The next stage was to prepare engaging learning media that could be used during mathematics learning. The service programme team also assisted the students in boosting their learning motivation.

The implementation stages include presentations aimed at motivating students on how to overcome obstacles faced while studying at CLAC (Rawa dkk., 2021), mentoring and providing encouragement to see the extent of students' willingness to learn, providing an overview to students in the form of essential theory and important knowledge of basic mathematics. This step also aims to ensure that participants gain knowledge and information about mathematics. Followed by the demonstration in the form of using the media directly, opening the link that has been prepared, students can learn the mathematics material in the media using the Android cellphone they own. Then, there are discussions and questions and answers where students can express what they have experienced so that they have difficulty learning and deepening knowledge that was previously lacking and increasing. Ikmawati et al. (2022) stated that this

step is used as a benchmark to what extent students know about the socialization material being followed.

In the final stage, an evaluation will be carried out in which participants will be given a questionnaire related to the implementation of CS to determine whether this training is efficacious in improving students' problem-solving abilities in CLAC, especially mathematics, both in classroom learning and in independent learning activities. Next, after the team's explanation, the questionnaire's results regarding student motivation will be evaluated. This step is important as an evaluation material for this activity and the continuation of further CS. Figure 1 depicts the implementation stages in this community service program.

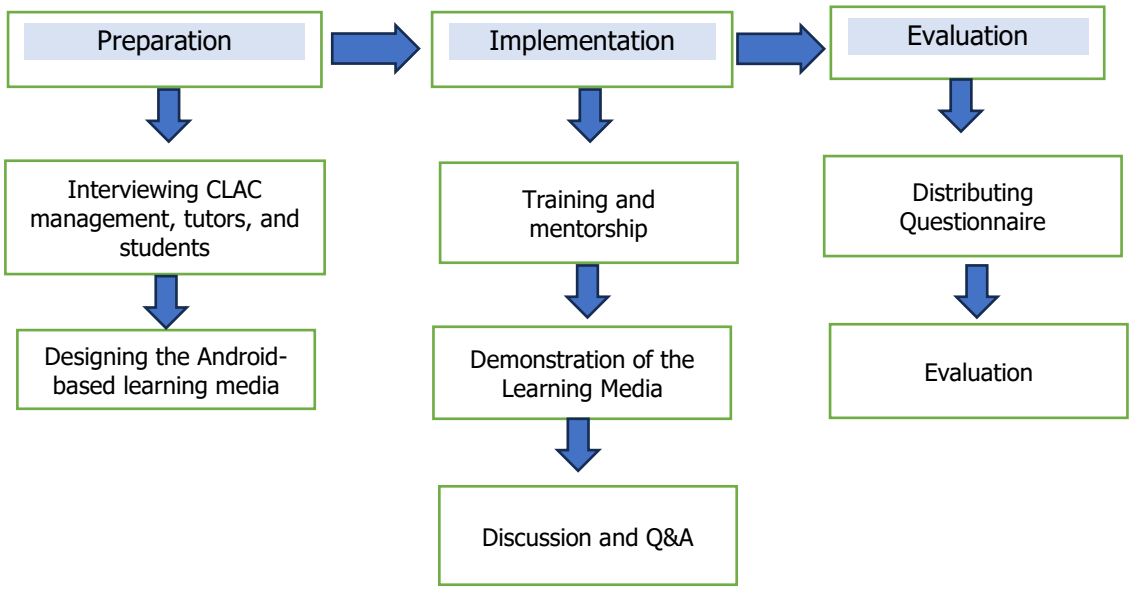

Figure 1. The stages of Implementing Community Service

At the end of the program, the team prepared a Participant Satisfaction Questionnaire to evaluate the Community Service (CS) activities conducted by the Mathematics Education Study Program, FKIP UNMUL. The participants' responses to each statement item were evaluated using a Likert scale (see Table 1).

Table 1. Likert scale

Response	Mark
Very good	4
Good	3
Enough	2
Not Good	1

The questionnaire results were then classified based on the participants' answer choices (see Table 2). The Participant Satisfaction Index for programme implementation was determined using the formula below.

$$IKMK = \frac{\sum n * Si}{N}$$

Description: Si = Score of each aspect statement item; n = Item predicate; dan N = Number of participants

Table 2. Partner Satisfaction Index Scale for Activities

Index	Category
≥ 3,25	Very Good/ Very Satisfied
2,50 – 3,24	Good/Satisfied
1,75 – 2,49	Enough
1,00 – 1,74	Not Good/Not Satisfied

Results and Discussion

CLAC Mahakam Jaya is located at SMP Negeri 34 Samarinda Jalan Amina Syukur. To gain knowledge, students need learning resources. Learning resources are all things that come from humans, including specific data that can help students in the learning process and make it easier for them to achieve learning goals (Kusumandari et al., 2023). Some package students are already working, so their time is divided between studying and working. They need special attention to avoid getting left behind in their lessons. One way is to share the material they have studied, which can be accessed by cellphone. The Package C pursuit program is aimed at people who, due to social, economic, time, opportunity and environmental limitations, cannot attend Senior High School (SHS) (Winarti et al., 2022). The preparation stage began with interviews conducted with CLAC managers, tour guides, and students, which showed students feeling inferior and different from students who attended formal schools and had difficulty following mathematics lessons. The previously tested media had been adjusted to the material at the package C level.

The implementation stage begins with the provision of counselling materials by the Team, divided into three sessions, starting with an explanation of the steps to motivate package students so they do not feel inferior. Providing motivation cannot be separated because it is an important component of the learning process itself (Nuryaman, 2010). Linking to engaging mathematics learning with easy-to-understand steps, mentoring students by providing an overview that schooling in package C is the same as formal schools, both to continue to a higher level or to be ready to compete in the world of work. The challenges students face after graduating and looking for work are that there is much competition among fellow job seekers Turistiati & Ramadhan (2019), so it is crucial to equip them with a strong mentality and eliminate the worry that there will be a suitable job after graduation. Pertiwi (2020) also stated that the interactive multimedia that had been developed was very effective in increasing students' learning motivation (attention). We must increase Indonesia's ranking by making students like mathematics lessons. Indonesia is ranked 72 out of 78 countries, while Indonesia's science ranking ranks 70 out of 78 (Komalasari & Widyaningsih, 2021).

Figure 2. Interactions in the learning process

Furthermore, the material from the Team was interspersed with quiz games and an introduction to the Metri Math application to package students, where students can access the material in the application anywhere and anytime (see Figure 3). Internet access provides an immense opportunity or space for students to learn from various learning sources, devices, and applications. Therefore, educators have a significant role in developing learning models that can accommodate the needs of students along with the availability of technology (Nurhayati et al., 2022). We provide them access to the Metri Math application. In this digital era, one of the special skills needed is using applications (Jumriadi et al., 2021).

Figure 3. Introduction to the Android-based application Metri Math and Barcode Scan

The final part of this implementation stage is a discussion and Q&A on the mentoring and motivational materials and the media introduced. To ensure mentoring is effective, mentors must focus on understanding and addressing the unique challenges faced by each student through an individualized, needs-based approach. By using media, mentoring can be done more flexibly. For example, students can learn anytime and anywhere through the application that has been prepared. We from the Team also provide further guidance through the chat discussion forum.

The final stage of this activity is evaluation, which is done by distributing questionnaires

to participants after implementing the CS. This step evaluates the impact of this program and its follow-up. Table 3 recapitulates the partner satisfaction survey results regarding the implementation of CS.

Table 3. Level of Partner/Participant Satisfaction with the Implementation of CS

No	Aspects measured	Satisfaction Level of CS Implementers				Satisfaction Index	Satisfaction Level
		SA	A	DA	SD		
1	CS materials follow the needs of the Participants	41,18	58,82	0,00	0,00	3,41	Very satisfied
2	CS activities are carried out according to the expectations of the Participants	29,41	70,59	0,00	0,00	3,29	Very satisfied
3	Ways of the speaker presenting CS material	64,71	35,29	0,00	0,00	3,65	Very satisfied
4	The material presented is clear and easy to understand	35,29	52,94	11,76	0,00	3,24	Satisfied
5	The time provided is appropriate for the delivery of material and CS activities.	52,94	47,06	0,00	0,00	3,53	Very satisfied
6	CS members involved in community service activities provide flexible and friendly services.	47,06	52,94	0,00	0,00	3,47	Very satisfied
7	CS activities are carried out continuously	41,18	58,82	0,00	0,00	3,41	Very satisfied
8	Every complaint/question /problem raised is followed up properly by the resource persons/ service members involved	23,53	64,71	11,76	0,00	3,12	Satisfied
9	Partners/ Participants get direct benefits from the activities the implemented CS	35,29	64,71	0,00	0,00	3,35	Very satisfied
10	Community Service activities have succeeded in increasing motivation and willingness to learn mathematics.	29,41	70,59	0,00	0,00	3,29	Very satisfied
11	Overall, Participants are satisfied with this CS activity	52,94	47,06	0,00	0,00	3,53	Very satisfied

Based on the data in Table 3, the suitability of the program material to the needs of participants gets high satisfaction from Partners/Participants, where more than 40% of participants are very satisfied, and almost 60% are satisfied. It shows that the material presented is under the expectations and needs of Partners/Participants. In the second aspect related to the suitability of partner expectations with implementing the CS program, Most participants are satisfied 70.59% with the CS activities. Although there was a decrease in the very satisfied category, the overall level of satisfaction remains high. The third aspect related

to how the presenter presents interesting CS material: This aspect has a very high satisfaction value, with more than 60% of participants being very satisfied with how the material is presented. It shows that the presenter's method of delivering the material is very effective. The fourth aspect related to the Material Presented is Clear and Easy to Understand: Although most participants are satisfied, around 11.76% were dissatisfied with the delivery of this CS material. It shows that there is room for improvement in terms of delivering material that is easier to understand. The fifth aspect is related to the time provided appropriately for the delivery of CS material and activities: The time allocated for CS activities was considered adequate by most Partners/Participants, with almost 53% very satisfied and 47% satisfied. The sixth aspect related to the CS Team Providing Flexible and Friendly Service: Service The flexibility of the CS members was highly appreciated by the participants, with almost half feeling very satisfied. No participants felt dissatisfied with this aspect. The seventh aspect related to CS Activities Carried Out Sustainably: Most participants felt satisfied with this CS activity. However, none felt very dissatisfied, indicating that sustainable activities were important. The eighth aspect related to Complaints, Questions and Problems Followed Up Well: Although the majority were satisfied with handling complaints, around 11.76% of participants felt that their complaints were not followed up well. This result indicates that there are areas that need to be improved in response to complaints. The ninth aspect related to Partners/Participants Getting Direct Benefits from CS Activities: The direct benefits obtained by Partners/Participants from CS activities were assessed as positive, with almost 36% feeling very satisfied and 65% satisfied. The tenth aspect related to CS Activities Increasing Motivation and Willingness to Learn Mathematics: This CS succeeded in increasing the motivation and willingness of participants to learn, with the majority feeling satisfied and some feeling very satisfied. The eleventh aspect related to Participant Satisfaction with the Overall CS Program: Participants felt very satisfied with this CS activity. Almost half of the participants stated that they were very satisfied, and the rest were satisfied, indicating that the objectives of this program were achieved well.

Based on the analysis results, overall, the level of participant satisfaction with this CS activity is very high, with most indicators showing the category "Very Satisfied", which is in line with research conducted by (Rahmawati et al., 2022). However, several points can be followed up to improve the participant experience, such as an improved understanding of the material. Although most participants were satisfied, some felt that the material was somewhat challenging to understand, so simplification or repetition of the material was needed, which could be done through further discussion. Responses to questions and complaints must be followed up (Faishol et al., 2021). It was found that several students who did not actively participate in the question and answer session during the implementation could be active when they were initially passive chat, which could become more active, creative, and have high self-confidence. However, most participants were satisfied with the responses given. It is important to ensure that participants follow up on every question or problem appropriately.

Conclusion

From the results of the activities carried out, it can be concluded that with the assistance provided, several participants were enthusiastic about asking questions and sharing. Based on this, the response to the implementation of CS by participants is positive towards implementing the CS process of the Mathematics Education Study Program, FKIP Unmul. It is hoped that participants will never feel different from students in formal schools because when they enter college, they will compete equally; there is no difference, as well as when looking for work. This Android media can be further developed by adding features or enriching learning materials and holding training sessions for students who need further assistance. It will further motivate students to learn and reduce boredom in mathematics.

Acknowledgement

We want to thank the Dean of FKIP Mulawarman University, the Coordinator of the Mathematics Education Study Program UNMUL, the Mahakam Jaya CLAC Partner School, and the community service team colleagues who have helped and supported this CS activity.

References

Agustina, E., Rohmah, A., & Kuspiyah, H. R. (2019). Pendampingan Bimbingan Belajar Bahasa Inggris dan Bakti Sosial di Yayasan Pendidikan dan Sosial Roudlotut Thullab. *Jurnal Indonesia Mengabdi*, *1*(1), 1–5. https://doi.org/10.30599/jimi.v1i1.415

Danial, H., & Usman, Z. R. (2021). Pendampingan Gerakan Literasi Pendidikan Kesetaraan Melalui Papan Edukasi Berbasis Karakter di PKBM Nurain, Kabupaten Bone Bolango. *Madaniya*, *2*(3), 231–241. https://doi.org/10.53696/27214834.83

Dewi, A. W., Noor, A. H., & Kartika, P. (2023). Pendampingan Orangtua Dalam Meningkatkan Minat Belajar Daring Anak Kesetaraan Paket A Setara SD. Community Education Journal is published by Pendidikan Masyarakat Department in Indonesia of IKIP Siliwangi Bandung, 6(2), https://journal.ikipsiliwangi.ac.id/index.php/comm-edu/article/view/8817

Faishol, R., Mashuri, I., Ramiati, E., Warsah, I., & Laili, H. N. (2021). Pendampingan Belajar Siswa Melalui Pembelajaran Multimodal Untuk Meningkatkan Kemampuan Siswa di Masa Pandemi Covid-19. Manhaj: Jurnal Penelitian dan Pengabdian Masyarakat, 10(1), 59. https://doi.org/10.29300/mjppm.v10i1.4185

Fitriyani, N. N., Kusuma, R. M., Supriadi, Y. N., Kusuma, J. W., & Hamidah, H. (2022). PKM Peran Mahasiswa Kampus Mengajar 3 dalam Meningkatkan Literasi dan Numerasi Peserta Didik di Sekolah Dasar. *International Journal of Community Service Learning*, *6*(2), 240–248. https://doi.org/10.23887/ijcsl.v6i2.51914

Hayati, R., Kartika, Y., & Wahyuni, R. (2023). Pendampingan Penggunaan Alat Peraga Dalam Meningkatkan Kemampuan Literasi Matematika Siswa Sekolah Dasar. *JMM (Jurnal Masyarakat Mandiri)*, *7*(5), 5242. https://doi.org/10.31764/jmm.v7i5.17107

Himmi, N., Agustyaningrum, N., & Husna, A. (2021). Pendampingan Kesetaraan Paket-C Mata Pelajaran Matematika Semasa Pandemi Covid-19 di LPKA Batam.

Ikmawati, I., Samsuddin, A. F., Najmiah, S., Ramadhan, D. R., Rusdiana, R., Untu, Z., Muhtadin, A., Fendiyanto, P., Rizki, N. A., & Kurniawan, K. (2022). Pendampingan Orang Tua dalam Pembuatan Media Belajar Matematika di Kelurahan Sungai Pinang Luar Kota Samarinda. *Bubungan Tinggi: Jurnal Pengabdian Masyarakat*, *4*(4), 1485. https://doi.org/10.20527/btjpm.v4i4.6384

Ikmawati, I., Yusuf, M., Pradana Putra, F., Rizki Ramadhan, D., & Insan Ramadhani, N. (2023). Pengembangan Media Pembelajaran Matematika Berbasis Android Sebagai Upaya

Meningkatkan Minat Belajar Siswa Paket C. *Asimetris: Jurnal Pendidikan Matematika dan Sains*, *4*(2), 94–102. https://doi.org/10.51179/asimetris.v4i2.2271

Jumriadi, J., Anita, A. S., Amani, M., Hafiz, A., & Gandhi, M. (2021). Pelatihan Ms. Office Warga Kelurahan Pengembangan Peserta Program Paket C Pkbm Az Zahra Kota Banjarmasin. *Jurnal Pengabdian Al-Ikhlas*, *6*(3). https://doi.org/10.31602/jpaiuniska.v6i3.4627

Komalasari, M. D., & Widyaningsih, N. (2021). Pendampingan Pengembangan Paket Penilaian Pembelajaran Jarak Jauh Berbasis Higher Order Thinking Skill (Hots) Pada Guru Sekolah Dasar. *1*(4).

Kusumandari, R. B., Istyarini, & Subkhan, E. (2023). Pemberdayaan Guru Tk Melalui Pelatihan Pembuatan E-Modul Interaktif Berbasis Hots. Jurnal Abdimas Ilmiah Citra Bakti, 4(1), 70–85. https://doi.org/10.38048/jailcb.v4i1.1438

Lismayanti, M., Nurhayati, S., & Rosita, T. (2021). Peran Orang Tua Dalam Memotivasi Anak Untuk Mengikuti Pembelajaran E-Learning (Online) Dalam Meningkatkan Minat Baca Pada Program Kesetaraan Paket C Di Pkbm Srikandi. *Comm-Edu (Community Education Journal)*, *4*(2), 38-45. https://doi.org/10.22460/comm-edu.v4i2.6794

Nurhayati, A. S., Kusnandar, K., Mega, N. A., & Warisno. (2022). Analisis Kebutuhan Pengembangan Model Pembelajaran Terintegrasi Teknologi Informasi Dan Komunikasi Pada Sanggar Kegiatan Belajar. *Jurnal Teknodik*, 69–88. https://doi.org/10.32550/teknodik.vi.793

Nurkholis, N. (2013). Pendidikan Dalam Upaya Memajukan Teknologi. *Jurnal Kependidikan*, *1*(1), 24–44. https://doi.org/10.24090/jk.v1i1.530

Nuryaman, Y. (2010). Hubungan Pendampingan Tutor Dengan Motivasi Belajar Warga Belajar Program Pendidikan Kesetaraan Paket B Di Pusat Kegiatan Belajar Masyarakat (PKBM) Gema Insan Peduli Umat (Gipu). Jurnal Pendidikan Luar Sekolah 5(2). https://ejournal.upi.edu/index.php/pls/article/view/1210.

Pertiwi, A. P. (2020). Pengembangan Media E-Modul Pada Mata Pelajaran Bahasa Indonesia Materi Teks Cerita Sejarah Bagi Peserta Didik Paket C Di PKBM Az-Zahra Balas Klumprik Surabaya..

Rahmawati, N. K., Maruf, A. H., Ahmad, A., & Nurimani, N. (2022). Pendampingan Pembelajaran Dan Pemberian Motivasi Dalam Meningkatkan Minat Belajar Bagi Anak-Anak Di PKBM. *Journal of Social Outreach*, *1*(1), 43–52. https://doi.org/10.15548/jso.v1i1.3846

Rawa, N. R., Wewe, M., Wangge, M. C. T., Meo, V., Gelo, O., Kosu, M. B. P., & Ngina, M. Y. (2021). Pendampingan Bimbingan Belajar Matematika Berbantuan Alat Peraga Bagi Siswa Sekolah Dasar Di Kelurahan Mataloko. *Jurnal Abdimas Ilmiah Citra Bakti*, *2*(2). https://doi.org/10.38048/jailcb.v2i2.392

Susanti, V. D., & Maharani, S. (2016). IbM Membangun "Desa Cermat" Melalui Bimbingan Belajar Dalam Meningkatkan Hasil Belajar Matematika Siswa. *Jurnal Terapan Abdimas*, *1*, 39. https://doi.org/10.25273/jta.v1i1.341

Turistiati, A. T., & Ramadhan, H. F. A. (2019). Pelatihan Soft Skills Dan Pendampingan Siswa-Siswi SMK Di Kota Bogor Untuk Persiapan Memasuki Dunia Kerja. *Jurnal Komunitas : Jurnal Pengabdian kepada Masyarakat*, *1*(2), 1–8. https://doi.org/10.31334/jks.v2i1.286

Winarti, H. T., Mustangin, M., Lapandi, R. D. D. U., Aulia, E. H., & Alya, N. (2022). Perencanaan Platform Pembelajaran Daring Pada Prorgam Kesetaraan Paket C Di PKBM Bangun Rejo Samarinda. *Jurnal Lentera Pendidikan Pusat Penelitian LPPM UM METRO*, *7*(2), 190. https://doi.org/10.24127/jlpp.v7i2.2393