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Digital Transformation and the Need for Non-Formal Education Curriculum: An Analytical Study of PKBM and SKB

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Abstract: *The purpose of this research is to analyze the needs of a non-formal education curriculum based on digital transformation in PKBM and SKB in Wajo Regency. The research uses a qualitative descriptive approach with a needs analysis design. Data sources include PKBM/SKB managers, tutors, students, elements of the Education Office, and institutional documents. Data was collected through interviews, observations, documentation studies, and needs questionnaires, then analyzed through data reduction, data presentation, triangulation, and conclusion drawn. The results of the study show that the main needs include strengthening students' digital literacy, improving tutor digital competence, developing flexible learning, digital management, infrastructure, varied assessments, and local potential-based skills programs. The contribution of this research lies in the formulation of the basis for the development of a non-formal education curriculum that is not only oriented towards diplomas, but also the empowerment, life skills, job skills, and digital readiness of learning citizens.*

Abstrak : *Tujuan penelitian ini adalah menganalisis kebutuhan kurikulum pendidikan nonformal berbasis transformasi digital pada PKBM dan SKB di Kabupaten Wajo. Penelitian menggunakan pendekatan deskriptif kualitatif dengan desain analisis kebutuhan. Sumber data meliputi pengelola PKBM/SKB, tutor, peserta didik, unsur Dinas Pendidikan, serta dokumen kelembagaan. Data dikumpulkan melalui wawancara, observasi, studi dokumentasi, dan angket kebutuhan, kemudian dianalisis melalui reduksi data, penyajian data, triangulasi, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa kebutuhan utama meliputi penguatan literasi digital peserta didik, peningkatan kompetensi digital tutor, pengembangan pembelajaran fleksibel, manajemen digital, sarana prasarana, asesmen variatif, serta program keterampilan berbasis potensi lokal. Kontribusi penelitian ini terletak pada perumusan dasar pengembangan kurikulum pendidikan nonformal yang tidak hanya berorientasi pada ijazah, tetapi juga pemberdayaan, kecakapan hidup, keterampilan kerja, dan kesiapan digital warga belajar.*

Keywords : *Digital Transformation, Non-Formal Education Curriculum, PKBM, SKB, Equality Education*

INTRODUCTION

Digital transformation has changed the way educational institutions design services, manage data, organize learning, and reach diverse learners. In a global context, education is no longer sufficiently understood as a face-to-face activity that takes place in a conventional classroom, but as a learning ecosystem that is flexible, open, connected, and lasts for a lifetime. UNESCO emphasizes that digital technology does have great potential to expand access, support personalized learning, and help groups facing barriers of space, time, cost, and learning opportunities. However, UNESCO also reminds that

the benefits of technology do not occur automatically; The gap between internet access, device ownership, educator readiness, and content relevance is still a serious problem in digital education. Globally, only about 50% of junior high schools were connected to the internet for pedagogical purposes in 2022, while vulnerable groups tended to have lower digital access than more powerful socioeconomic groups (UNESCO, 2024).

The urgency of digital transformation in education also intersects with the learning crisis. The World Bank, UNESCO, UNICEF, and international partners report that about 70% of 10-year-olds in low- and middle-income countries experience *Learning Poverty*, that is, they are not able to read and understand simple texts. This condition shows that the expansion of access to education is not always in line with the quality of learning outcomes (Group, 2022). Within the framework of SDG 4, education is directed to ensure quality education that is inclusive, equitable, and opens up lifelong learning opportunities for all. This principle is very close to the mandate of non-formal education, especially the Center for Community Learning Activities (PKBM) and the Learning Activity Studio (SKB), because these two institutions are present to serve learning citizens who are not fully accommodated by the formal education path.

The need for digital transformation is getting stronger as internet penetration increases. BPS data through Susenas 2024 shows that 72.78% of Indonesia's population has accessed the internet, up from 69.21% in 2023. In the same year, 68.65% of the population already owned a mobile phone, while home computer ownership was still relatively low, at 18.52% (BPS, 2024b). This data shows two faces of digital transformation: on the one hand, people are increasingly familiar with the internet and mobile devices; On the other hand, access to productive devices such as computers is not evenly distributed. For PKBM and SKB, this situation is a challenge in itself. Digitalization cannot only be translated as the use of applications or online learning, but needs to be designed as a management strategy, curriculum, learning, assessment, mentoring, and strengthening students' life skills (Wuryanta, 2017).

In terms of policy, the direction of national education provides a large space for adaptive learning and based on the needs of students. The Independent Curriculum is established as a national curriculum for early childhood education, primary education, and secondary education through Permendikbudristek Number 12 of 2024, with a transition period for educational units that have not yet implemented it. This policy emphasizes student-centered learning, strengthening competencies, and adjusting to the context of the educational unit (Sari, 2023). In equality education, the curriculum structure contains not only general subject groups, but also empowerment and skills. The official portal of the Ministry of Education and Education's Curriculum even displays the learning outcomes of equality education from Phase A to Phase F, including skills options such as robotics, waste management, integrated agriculture, baristas, capture fisheries, catering, fashion, office computers, and content

creators (Ministry of Education and Culture, 2022). This shows that the non-formal education curriculum should ideally not stop at diploma equivalence, but should be a bridge to literacy, digital skills, job skills, independence, and social participation.

However, the factual conditions in Wajo Regency show that there is a gap between these ideals and the reality of community education. BPS Wajo Regency reported that the publication of the 2024 Wajo Regency Education Statistics was compiled based on the March 2024 Susenas and contained indicators of educational processes and achievements, such as APS, APM, APK, and illiteracy rates (BPS, 2024a). The data shows that the APS aged 7–12 years reached 99.89%, but dropped sharply at the age of 13–15 years to 82.05% and even lower at the age of 16–18 years, which is 58.05%. This means that the high school equivalent age level is a vulnerable point for the sustainability of education in Wajo. In addition, the population aged 15 years and above who are literate reaches 91.43%, so there are still around 8.57% of the population who need to be solved from illiteracy. BPS also noted that 28.14% of the population aged 7-23 years old did not go to school anymore, while 1.08% had never gone to school.

This condition strengthens the position of PKBM and SKB as strategic institutions in expanding access to equality education (Gusta & Christina, 2020). However, the problem that arises is not only about how to attract out-of-school children or adult learners into educational services, but how the non-formal education curriculum can really suit their needs. PKBM and SKB students generally have different backgrounds of age, occupation, learning experience, motivation, economic barriers, and non-uniform skill needs. Therefore, a curriculum that is too administrative, uniform, and less responsive to the local context risks making equality education lose its transformative power. The impact can be seen in the low sustainability of learning, weak digital literacy, limited job skills, and suboptimal quality of non-formal education services.

Previous studies have shown that non-formal education has great potential as a flexible, inclusive, and transformative learning space. Tohani et al. (2023) highlighting the importance of internal quality assurance at the center of community learning activities, especially when institutions face pressure to change services. Rahabav and Souisa (2021) emphasized that the management of non-formal education in Indonesia still needs systematic evaluation so that the planning, implementation, and quality control functions run better. Sunarti et al. (2024) shows that *blended learning* can support the development of technology-andragogy competencies for community educators. Meanwhile, Kohler et al. (2022) and Morris and Rohs (2021) emphasized that digitalization in non-formal education needs to be linked to independent learning, information literacy, sustainability, and educator capacity, not just the use of digital platforms. These references come from the list of references that sensei attached and became the academic basis for positioning this research.

Nevertheless, there are still scientific gaps that need to be filled. Empirically, there have not been many studies that specifically map the needs of the non-formal education curriculum in relation to digital transformation in PKBM and SKB at the district level, especially Wajo Regency. Methodologically, many educational digitalization research focuses more on the effectiveness of media or online learning, not enough to examine curriculum needs from the perspective of managers, tutors, students, and institutional contexts. Theoretically, the integration between lifelong education, non-formal education management, digital transformation, and adaptive curriculum development has not been widely formulated in a single complete analytical framework. Contextually, the social, economic, geographical, and educational characteristics of the Wajo community demand a different curriculum model from regular formal education units.

Based on this gap, a research entitled "Digital Transformation and the Needs of the Non-Formal Education Curriculum: An Analytical Study on Community Learning Activity Centers (PKBM) and Learning Activity Studios (SKB) in Wajo Regency" is important. This research is directed to analyze the needs of the non-formal education curriculum that is relevant to digital transformation, both in terms of planning, curriculum content, learning strategies, assessment, data management, and strengthening students' skills. The initial solution offered is not in the form of digitalization that is patchy, but the concept of an adaptive curriculum based on the needs of learning citizens, digital skills, contextual skills, and strengthening institutional quality. The novelty of this research lies in the effort to connect the analysis of curriculum needs with the digital transformation of PKBM and SKB management in a contextual manner in Wajo Regency. Theoretically, this research enriches the study of non-formal education, curriculum, and digital transformation. Practically, the results can be the basis for the preparation of an equality education curriculum development model that is more flexible, relevant, measurable, and in favor of learning citizens.

METHOD

This study uses a type of qualitative descriptive research with a needs analysis approach. This approach was chosen because the research aims to deeply understand the needs of the non-formal education curriculum in the context of digital transformation in PKBM and SKB in Wajo Regency. The research is not directed to test hypotheses statistically, but to describe factual conditions, identify gaps between the curriculum that runs and the needs of learning citizens, and formulate the basis for curriculum development that is more adaptive to digital developments and equality education needs. Thus, this study seeks to capture the experiences, views, expectations, and obstacles experienced by managers, tutors, and students in the implementation of non-formal education.

The data sources in this study consist of primary data and secondary data. Primary data was obtained directly from research informants, namely PKBM managers, SKB managers, equality education tutors, students, and related parties in the field of non-formal education at the Wajo Regency Education Office. Informants were selected purposively, namely based on the consideration that they have experience, knowledge, and direct involvement in curriculum management, learning, and the use of digital technology in non-formal educational institutions. Secondary data were obtained from equality education curriculum documents, PKBM and SKB profiles, institutional activity reports, student data, non-formal education policies, and other official documents relevant to digital transformation and the quality of equality education.

Table 1. Identity of the Interview Informant

Informant Code	Status/Job Title	Institutions	Information Focus
I-1	PKBM Manager	PKBM in Wajo Regency	Institutional management, curriculum, and digitalization needs
I-2	Head / Manager of SKB	SKB Wajo Regency	Program policy, learning management, and quality of equity education
I-3	Equality Education Tutor	PKBM	Implementation of learning and student needs
I-4	Equality Education Tutor	SKB	Learning strategies, digital media, and evaluation
I-5	Package B Students	PKBM/SKB	Learning experiences and learning needs
I-6	Package C Students	PKBM/SKB	Skills needs, learning flexibility, and digital literacy
I-7	Elements of the Education Office	Wajo Regency	Policy support and institutional strengthening of non-formal education

Data collection techniques were carried out through in-depth interviews, observations, documentation studies, and needs questionnaires. In-depth interviews were used to explore information about the implementation of the curriculum, readiness for digital transformation, management constraints, the need for tutor competencies, and expectations for the development of the non-formal education curriculum. Observations were carried out to see firsthand the condition of digital facilities, the learning process, the use of learning media, institutional administration, and the interaction between tutors and students. Documentation studies are used to examine the suitability of curriculum documents, learning tools, activity schedules, student data, and institutional reports. Meanwhile, the needs questionnaire was used to obtain an initial picture of the perception of students and tutors towards digital-based learning needs, life skills, work skills, and curriculum flexibility.

The data collection instruments in this study include interview guidelines, observation sheets, documentation study guidelines, and needs analysis questionnaires. The interview guidelines are

prepared based on the focus of the research, including aspects of the curriculum, digital transformation, learning management, student needs, tutor competence, and institutional support. The observation sheet is used to record real conditions in PKBM and SKB, especially related to the readiness of infrastructure, the use of technology, and the implementation of learning.

Table 2 Interview Instruments

No.	Aspects Studied	Data Source	Interview Questions
1	Conditions of the non-formal education curriculum	PKBM/SKB manager, tutor	How is the implementation of the equality education curriculum currently running in PKBM/SKB?
2	Relevance of the curriculum	Tutors, Learners	Is the learning material provided in accordance with the needs of the students?
3	Digital transformation	Manager, tutor	What digital technologies have been used in administrative and learning activities?
4	Institutional readiness	PKBM/SKB Manager	How ready are institutions to support digital transformation?
5	Tutor digital competence	Tutor	To what extent are tutors able to use digital technology in learning?
6	Student needs	Students	What skills do students need most in participating in equality education?
7	Implementation barriers	Managers, tutors, learners	What are the main barriers to the implementation of digital-based learning or management?
8	Curriculum development	Manager, tutor	What is the ideal curriculum form to support the quality of equality education?
9	Quality of learning	Tutors, Learners	Can the use of technology help improve the quality of learning?
10	Expectations and recommendations	All informants	What are your suggestions for the development of a non-formal education curriculum in the future?

Table 3 Needs Questionnaire

No.	Aspects	Questionnaire Statement	Scale
1	Curriculum requirements	The learning materials in PKBM/SKB need to be adjusted to the needs of students' lives.	1 2 3 4 5
2	Curriculum requirements	The equality education curriculum needs to contain job skills that are in accordance with the local potential of Wajo Regency.	1 2 3 4 5
3	Digital literacy	Students need to be equipped with the ability to use digital devices.	1 2 3 4 5
4	Digital literacy	Learning needs to use digital media to make it more interesting and easy to understand.	1 2 3 4 5
5	Learning flexibility	The study schedule needs to be made more flexible according to the conditions of the students.	1 2 3 4 5
6	Needs-based learning	Learning materials need to be linked to the students' daily experiences.	1 2 3 4 5

7	Tutor competence	Tutors need to get training in the use of digital technology in learning.	1 2 3 4 5
8	Digital management	PKBM/SKB needs to use a digital system to manage student and learning data.	1 2 3 4 5
9	Infrastructure	Institutions need to improve internet facilities and digital devices.	1 2 3 4 5
10	Quality of education	Digital transformation can help improve the quality of equality education.	1 2 3 4 5
11	Skills program	Equality education needs to add digital-based skills programs, such as office computers or content creators.	1 2 3 4 5
12	Learning evaluation	Learning outcome assessment needs to use more varied methods, not just written exams.	1 2 3 4 5

Documentation guidelines are used to search for official agency documents and policies that support the analysis. The needs questionnaire is prepared in the form of a closed and open statement so that respondents can provide assessments as well as input freely.

The data analysis technique is carried out interactively through the stages of data reduction, data presentation, and conclusion drawn. Data from interviews, observations, documentation, and questionnaires were reduced by sorting out information relevant to curriculum needs and digital transformation. Furthermore, the data is presented in the form of narrative descriptions, needs matrices, and thematic groupings, such as curriculum needs, digital competency needs, learning management needs, and implementation barriers. To maintain the validity of the data, this study uses source triangulation and triangulation techniques, which are comparing information from managers, tutors, students, documents, and observation results. The final results of the analysis were used to formulate an overview of the needs of the digital transformation-based non-formal education curriculum in accordance with the characteristics of PKBM and SKB in Wajo Regency.

RESULTS AND DISCUSSION

Based on the results of interviews with PKBM managers, SKB managers, tutors, students, and elements of the Wajo Regency Education Office, it was found that the need for the development of a non-formal education curriculum based on digital transformation is a fairly urgent need. These findings emerged from several main aspects, namely curriculum conditions, student characteristics, skill needs, use of digital technology, institutional management, readiness of infrastructure, tutor competence, learning flexibility, and the direction of non-formal education development in the future.

Table 4 Interview Results

No.	Interview Focus	Summary of the Interview	Informants
1	Conditions of the non-formal education curriculum	The equality education curriculum has followed the applicable provisions, but its implementation still tends to be administrative. Some materials have not fully adjusted to the real needs of students, especially work needs, digital skills, and life skills.	I-1, I-2, I-3
2	Curriculum suitability with the characteristics of students	Students have diverse backgrounds, ranging from teenagers who have dropped out of school, workers, housewives, to adult learning residents. This condition makes their learning needs different.	I-1, I-3, I-5, I-6
3	Learners' skill needs	Students need more practical materials, such as basic computers, internet use, digital marketing, business skills, communication, and simple work skills that are in accordance with the local potential of Wajo Regency.	I-3, I-4, I-5, I-6
4	Utilization of digital technology in learning	Digital technology has begun to be used, especially through WhatsApp, Google Forms, learning videos, and searching for materials through the internet. However, its use has not been planned in the curriculum and still depends on the abilities of each tutor.	I-3, I-4, I-5
5	Digitization of PKBM and SKB management	The management of student data, schedules, attendance, and activity reports is still partly done manually. Some institutions already use simple applications, but do not yet have an integrated digital management system.	I-1, I-2, I-7
6	Readiness of digital facilities and infrastructure	Digital facilities are still limited. Not all institutions have adequate computers, stable internet networks, projectors, or digital learning devices. Students also do not all have personal devices that support online learning.	I-1, I-2, I-3, I-5
7	Tutor digital competence	Tutors are generally able to use basic communication applications, but not all have the ability to create digital learning media, manage online classes, prepare digital evaluations, or make optimal use of learning platforms.	I-3, I-4, I-7
8	Flexibility of time and learning patterns	Many learners have jobs or family responsibilities, so they need flexible study schedules. Blended learning between face-to-face, self-paced and digital-based is considered more appropriate.	I-5, I-6, I-3
9	Barriers to implementing digital transformation	The main obstacles include limited devices, internet networks, quota fees, digital tutors and learners' digital capabilities, and the lack of clear technical guidance in implementing digital learning.	I-1, I-2, I-3, I-4
10	Curriculum development needs	The informant assessed that the curriculum needs to be developed by adding digital literacy materials, vocational skills, entrepreneurship, project-based	I-1, I-2, I-3, I-6, I-7

		learning, and materials that are close to the lives of the Wajo people.	
11	Quality of learning equality education	The quality of learning is not evenly distributed between institutions. There are tutors who actively use digital media, but there are also those who are still dominant in using lecture methods and written assignments.	I-2, I-3, I-4
12	Expectations for non-formal education	The informant hopes that PKBM and SKB will not only become a place to obtain equality diplomas, but also become community learning centers that are able to equip students with life skills, work skills, and digital skills.	I-1, I-2, I-5, I-6, I-7

Conditions of the Non-Formal Education Curriculum

The results of the interviews show that the equality education curriculum in PKBM and SKB in Wajo Regency has basically followed the applicable provisions. However, in its implementation, the curriculum still tends to be administrative. This means that the curriculum is more understood as a formal document that must be available, but it has not yet fully become a living, flexible, and appropriate learning guideline for students.

Several informants said that the learning materials still focus on fulfilling core subjects and completing the equality program. In fact, non-formal education students not only need diplomas, but also skills that can be used in daily life. These needs include work skills, life skills, the ability to use digital technology, and the ability to adapt to social and economic changes.

These findings suggest that the non-formal education curriculum needs to be developed to be more contextual. The curriculum needed is not only a curriculum that follows the national structure, but also a curriculum that is able to read the needs of learning residents, the local conditions of Wajo Regency, and the development of the digital world.

Curriculum Suitability with Student Characteristics

Students in PKBM and SKB have very diverse backgrounds. They consist of adolescents who have dropped out of school, workers, housewives, adult learning residents, and people who want to continue their education through the equality path. This diversity causes the learning needs of students to not be completely equalized to students in formal schools.

Some students take part in equality education because they need a diploma to work. Others require practical skills to be able to open a business or improve their work skills. There are also students who need a flexible study schedule because they have to work or take care of their families. This condition shows that the non-formal education curriculum must make room for differences in students' experiences, ages, jobs, and learning goals.

Thus, a curriculum that is too uniform has the potential to be less effective. PKBM and SKB need a curriculum design that is more adaptive, provides learning options, and is able to adapt the material to the characteristics of learning residents.

Learner Skill Needs

Another important finding is the high need of students for practical skills. The informant said that students need materials such as basic computers, internet use, digital marketing, business skills, communication, and simple work skills that are in accordance with the local potential of Wajo Regency. This shows that equality education should not only be oriented towards academic completion, but also on the empowerment of students. Non-formal education programs will be more meaningful if they are able to help students acquire skills that can be directly used in social and economic life.

Digital skills are one of the prominent needs. Students need to have the ability to use digital devices, search for information, create simple documents, use communication media, and understand digital economic opportunities. In this context, the non-formal education curriculum needs to include digital literacy as an important part of strengthening student competencies.

Utilization of Digital Technology in Learning

The results of the interviews show that digital technology has actually begun to be used in learning activities. The most commonly used media are WhatsApp, Google Forms, learning videos, and searching for materials through the internet. The use of this technology helps tutors in conveying information, assigning assignments, and maintaining communication with students.

However, the use of digital technology has not been systematically integrated into the curriculum. Its use still depends on the initiative and ability of each tutor. Tutors who have better digital skills tend to be more active in using digital media, while tutors who are not familiar with technology still use conventional learning methods.

This condition shows that the digitization of learning in PKBM and SKB is still partial. Technology has not been fully integrated into curriculum design, learning strategies, evaluation, and classroom management. Therefore, a curriculum guide is needed that is able to direct the use of digital technology in a more planned manner.

Digitization of PKBM and SKB Management

In the aspect of institutional management, the results of the interviews show that the management of student data, learning schedules, attendance, and activity reports is still partly carried out manually. Some institutions have used simple applications, but there is no integrated digital management system.

This condition shows that digital transformation has not fully touched the institutional aspect. In fact, the quality of non-formal education is not only determined by learning activities in the classroom, but also by the quality of institutional management. Organized student data, documented attendance, easily accessible schedules, neat activity reports, and digitized teaching materials can help PKBM and SKB work more effectively.

Thus, digital transformation needs to be understood as a comprehensive change, not just the use of learning media. Digitalization must include administrative management, data management, institutional communication, learning monitoring, and quality evaluation.

Readiness of Digital Facilities and Infrastructure

One of the main obstacles found is the limitation of digital facilities and infrastructure. Not all institutions have adequate computers, stable internet networks, projectors, or digital learning devices. In addition, not all students have personal devices that support online learning.

This limitation is a serious challenge in the implementation of a digital-based curriculum. Although tutors and students have the desire to utilize technology, it will be difficult to run optimally if basic facilities are not available. Unstable internet, limited computers, and quota costs can hinder the sustainability of digital learning.

Therefore, strengthening infrastructure facilities is a priority need. PKBM and SKB require the support of digital devices, internet access, adequate learning spaces, and simple learning media that can be used sustainably.

Digital Tutor Competencies

The results of the interviews also show that the digital competence of tutors is still uneven. Some tutors are able to use basic communication applications, but not all are able to create digital learning media, manage online classes, prepare digital-based evaluations, or make optimal use of learning platforms.

Tutors have an important role as drivers of digital transformation in non-formal education. Without the readiness of tutors, digital devices will not have a major impact on the quality of learning. Therefore, tutor training is a very important need. The training needed is not only about how to use applications, but also about how to design digital-based learning, create simple teaching materials, use interactive media, prepare digital assessments, and assist students who have different technological abilities.

Time Flexibility and Learning Patterns

PKBM and SKB students need a flexible learning pattern. Many students have jobs, family responsibilities, or limited time to attend regular learning. Therefore, a fully face-to-face learning model does not necessarily suit their conditions.

The informant assessed that mixed learning between face-to-face, independent learning, and digital assistance was more suitable for non-formal education. This pattern allows students to continue learning even though they have other busy lives. With the help of digital technology, tutors can provide materials, assignments, or study directions outside of the face-to-face schedule.

These findings suggest that flexibility should be an important principle in the development of non-formal education curricula. The curriculum needs to make room for independent learning, project-based assignments, the use of digital media, and more meaningful face-to-face meetings.

Obstacles to the Implementation of Digital Transformation

The main obstacles in implementing digital transformation include limited devices, internet networks, quota costs, digital tutors and learners' digital capabilities, and the lack of clear technical guidance. These barriers are interrelated and cannot be solved in isolation.

If the device is available but the tutor is not ready, digital learning will not run optimally. Conversely, if the tutor is ready but the student does not have internet access or a device, digital learning is also difficult to implement. Therefore, digital transformation requires a comprehensive, gradual, and realistic approach.

Policy support, training, funding, technical assistance, and cooperation with various parties are important to strengthen digital transformation in PKBM and SKB.

Curriculum Development Needs

In general, the informant assessed that the non-formal education curriculum needs to be developed by adding digital literacy materials, vocational skills, entrepreneurship, project-based learning, and materials that are close to the life of the Wajo community.

The expected curriculum is one that not only teaches academic knowledge, but also helps students build life skills. In the context of Wajo Regency, the curriculum can be associated with local potential, work needs, community economy, and the development of digital technology.

Thus, an adaptive curriculum based on local needs is an important direction for the development of non-formal education. This kind of curriculum can make PKBM and SKB more relevant to people's lives.

Quality of Learning Equality Education

The quality of learning in equality education is not even between institutions. There are tutors who have actively used digital media and various learning methods, but there are also those who are still dominant in using lecture methods and written assignments.

This difference shows the need for minimum standards of learning quality in PKBM and SKB. These standards can include the use of learning media, variety of methods, student engagement, skill-based assessments, and digital technology integration. The quality of learning will improve if the curriculum, tutors, infrastructure, and management system run in an integrated manner.

Expectations for Non-Formal Education

The informant hopes that PKBM and SKB will not only be a place to obtain an equivalency diploma. Furthermore, PKBM and SKB are expected to become community learning centers that are able to equip students with life skills, work skills, digital abilities, and independence.

This hope shows that non-formal education has a strategic function as a space for community empowerment. PKBM and SKB can be a place for citizens to learn to build the future, not just to complete delayed education. Therefore, digital transformation and curriculum development need to be directed to strengthen the role of PKBM and SKB as lifelong learning institutions that are relevant to the needs of the digital era.

Table 5 Interview Results Matrix

No.	Main Themes	Key Findings
1	Curriculum	The non-formal education curriculum needs to be adapted to the diverse needs of students, especially the needs of life, work, and digital skills.
2	Digital transformation	Digitalization has begun to be used, but it has not been systematically integrated in management and learning.
3	Tutor	Tutors need to improve digital competence in order to be able to design more engaging and flexible learning.
4	Students	Students need learning that is practical, flexible, and close to the needs of daily life.
5	Institutional	PKBM and SKB need support for facilities, training, digital administration systems, and quality strengthening policies.
6	Development direction	The curriculum model needed is an adaptive curriculum based on digital transformation, life skills, local skills, and student empowerment.

To strengthen the findings of the interview results, this study was also equipped with questionnaire data given to respondents. The questionnaire was used to obtain a quantitative picture of the level of need for a digital transformation-based non-formal education curriculum. Thus, the results of in-depth interviews can be strengthened by the tendency of respondents' answers in a measurable

manner, so that the research analysis becomes more comprehensive, objective, and can describe the real needs of PKBM and SKB in Wajo Regency.

Table 6 General Recapitulation of Questionnaire Results

Components	Value
Number of respondents	10 people
Number of statements	12 grains
Maximum score	600
Total score obtained	540
Overall average	4,50
Overall percentage	90%
General categories	Very High

Based on the results of the questionnaire from 10 respondents, a total score of 540 out of a maximum score of 600 was obtained, with an average of 4.50 and a percentage of 90%. This result is in the very high category. This means that respondents consider that digital transformation and the development of non-formal education curriculum in PKBM and SKB in Wajo Regency are very important needs to be paid attention to.

The aspect with the highest score is found in the tutor's competence and students' digital literacy. Statements about the need for tutors to get training in the use of digital technology obtained an average of 4.80 or 96%. This shows that tutors have a central position in the success of digital transformation. Digitizing learning is not enough just by providing devices or internet networks, but requires tutors who are able to design interesting learning, use digital media, prepare technology-based evaluations, and guide students who have different digital abilities.

The digital literacy aspect of students also received a very high category, with an average of 4.65 or 93%. These findings show that PKBM and SKB students need to be equipped with the ability to use digital devices productively. These abilities are not only related to the use of mobile phones or social media, but also include information searching, the use of learning applications, document processing, digital communication, digital security, and the use of technology for economic or work activities.

In terms of curriculum needs, an average of 4.55 or 91% was obtained, including the very high category. This shows that the equality education curriculum needs to be more adapted to the life needs of students. The curriculum is not enough to be oriented only to the completion of subjects and diplomas, but must contain practical skills, work skills, life skills, and materials that are in accordance with the local potential of Wajo Regency. Thus, non-formal education can be a learning space that is closer to the social, economic, and future needs of students.

The aspect of learning flexibility obtained an average of 4.60 or 92%. These results show that non-formal education students need a more flexible learning pattern. Some students may have jobs, family responsibilities, long distances to live, or limited time to attend regular learning. Therefore, learning in PKBM and SKB needs to be designed in the form of a combination of face-to-face, independent learning, digital mentoring, and the use of simple communication media.

The aspect of digital management obtained an average of 4.30 or 86%, also in the very high category. This shows that PKBM and SKB need to start developing a digital system in the management of student data, learning schedules, attendance, activity reports, teaching materials, and evaluation results. Digital transformation not only touches the classroom, but also the institutional system. Digitized management can help institutions work more neatly, quickly, transparently, and easily evaluated.

The learning evaluation aspect received the lowest score compared to other aspects, which was an average of 3.90 or 78%, but was still in the high category. This means that respondents still consider that learning evaluation needs to be made more varied, even though the level of need is not as high as the level of tutor competence and digital literacy. Learning outcome assessments should not only be in the form of written exams, but can also be in the form of projects, portfolios, skills practices, digital assignments, presentations, or simple products that demonstrate students' real abilities.

In general, the results of the questionnaire show that the main needs in the development of the non-formal education curriculum at PKBM and SKB Wajo Regency include strengthening the competence of digital tutors, improving students' digital literacy, preparing an adaptive curriculum, flexible learning, strengthening digital facilities, technology-based management, and developing skills programs that are relevant to local needs. Thus, the results of this questionnaire reinforce that digital transformation in non-formal education should not be understood as limited to the use of learning media, but needs to be part of changes in curriculum, management, learning, and institutional quality systems.

The results of the study show that the digital transformation in PKBM and SKB in Wajo Regency has not yet been fully implemented, but is still in the early stages and is partial. This can be seen from the use of technology that is still limited to WhatsApp, Google Form, learning videos, and searching for materials through the internet. Technology has been present in learning practices, but it has not been fully integrated in curriculum design, institutional management, assessment, and student competency development. The interview findings were also strengthened by the results of the questionnaire which showed very high needs categories, especially in the aspects of tutor competence, digital literacy of students, learning flexibility, and adaptive curriculum needs. This means that learning residents, tutors, and institutional managers view digitalization as not just a complement, but as a strategic need to improve the quality of equality education.

Theoretically, these findings are in line with the concept of non-formal education as a flexible, contextual, and student-oriented learning space. Non-formal education cannot be completely equated with formal education because the characteristics of the students are more diverse, both in terms of age, occupation, learning experience, and the purpose of participating in education. Therefore, the non-formal education curriculum needs to move from an administrative pattern to a curriculum that is responsive to the needs of life, job skills, digital literacy, and community empowerment. This view is in line with Morris and Rohs (2021), which emphasizes that digitalization can strengthen independent learning for adults if supported by information literacy and learning readiness.

The findings of this study are also supported by the study Tohani et al. (2023) which emphasizes the importance of internal quality assurance at the center of community learning activities. The quality of PKBM and SKB does not only depend on the existence of the curriculum, but also on the ability of institutions to manage learning, student data, tutors, digital facilities, and program evaluation. Rahabav and Souisa (2021) also found that the management of non-formal education in Indonesia still requires systematic evaluation so that planning, implementation, and quality control can run more effectively. In a digital context, Sunarti et al. (2024) shows that blended learning is able to develop the technology-andragogy competencies of community educators. This reinforces the results of the study that tutors need continuous digital training.

The novelty of this research lies in the placement of digital transformation as part of the needs of the non-formal education curriculum, not just as a learning medium. The results of the study show that the main needs of PKBM and SKB in Wajo Regency include adaptive curriculum, digital literacy, local potential-based skills programs, digital management, flexible learning, and varied assessments. Thus, this study offers a more contextual direction for the development of an equality education curriculum: a curriculum that not only pursues diploma equivalence, but also equips learners with life skills, job skills, and digital capabilities that are relevant to the changing times.

CONCLUSION

The conclusion of this study shows that digital transformation and the development of non-formal education curriculum in PKBM and SKB in Wajo Regency are very important needs. The curriculum that is running has followed the provisions of equality education, but it still needs to be adjusted to the characteristics of diverse students. The results of interviews and questionnaires show that the main needs include strengthening digital literacy, improving tutor competence, flexible learning, digital management, adequate infrastructure, and skills programs relevant to local potential. Digitalization is not enough to be understood as the use of learning media, but must be part of institutional governance, learning strategies, assessments, and empowerment of learning citizens. Therefore, PKBM and SKB

need to develop an adaptive curriculum based on needs, life skills, work skills, and digital transformation.

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