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TELISIK+ 2026: Mastering SNPMB Challenges and Preparing for Future Professional Demands

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Abstrack

TELISIK+ 2026 merupakan program pengabdian kepada masyarakat berbasis komunitas yang dirancang untuk mengatasi ketimpangan akses persiapan Seleksi Nasional Penerimaan Mahasiswa Baru (SNPMB) sekaligus membekali peserta dengan kapasitas akademik dan keterampilan masa depan. Program ini mengusung pendekatan *high-tech meets high-touch* yang memadukan pembelajaran berbantuan kecerdasan buatan dengan pendampingan tutor secara langsung, dan terdiri atas empat program yang saling terhubung: bantuan buku UTBK, kelas daring UTBK, penulisan ilmiah dan publikasi, serta pengembangan website edukasi berbasis AI. Kegiatan dilaksanakan secara daring pada 16 Januari–20 April 2026 menggunakan kerangka *planning, organizing, actuating, controlling* (POAC) dan dievaluasi secara deskriptif-evaluatif dengan kerangka RE-AIM. Hasil pelaksanaan menunjukkan 36 peserta menerima bantuan buku persiapan UTBK, 36 sesi pembelajaran terselenggara pada tujuh subtes bersama 18 tutor, serta 24 peserta menyelesaikan seluruh subtes tryout dengan rerata skor 616,3 dan reliabilitas instrumen yang tinggi (Cronbach's alpha 0,897). Sebanyak 34 peserta diterima di perguruan tinggi negeri melalui jalur SNBP 2026. Platform digital yang dikembangkan telah mengarsipkan 2.273 butir soal UTBK dan 1.950 butir soal SKD, serta menjangkau 551 pengguna aktif terverifikasi. Temuan ini menunjukkan bahwa integrasi pemerataan sumber belajar, mentoring humanistik, dan teknologi AI dapat membentuk ekosistem pendidikan komunitas yang inklusif, adaptif, dan berkelanjutan.

Kata Kunci: pemerataan pendidikan, kecerdasan buatan, SNPMB, pengabdian masyarakat, pembelajaran daring

Abstract

TELISIK+ 2026 is a community-based educational initiative designed to address inequality in access to preparation for the National Student Admission Selection (SNPMB) while equipping participants with academic capacity and future-oriented skills. The program adopts a *high-tech meets high-touch* approach that combines AI-supported learning with direct human mentoring, and comprises four interconnected programs: the UTBK Book Assistance Equity Program, the Online UTBK Learning Program, the Scientific Writing, Research, and Publication Program, and the AI-Based Educational Website Development Program. The activities were conducted online from January 16 to April 20, 2026, following the *planning, organizing, actuating, and controlling* (POAC)

framework and evaluated through a descriptive-evaluative approach using the RE-AIM framework. The implementation resulted in 36 participants receiving UTBK preparation books, 36 learning sessions delivered across seven subtests by 18 tutors, and 24 participants completing all subtests of the practice test with a mean score of 616.3 and high instrument reliability (Cronbach's alpha of 0.897). A total of 34 participants were admitted to public higher education institutions through the 2026 SNBP pathway. The developed platform has archived 2,273 UTBK items and 1,950 SKD items, reaching 551 verified active users. These findings indicate that integrating equitable learning resources, human-centered mentoring, and AI technology can form an inclusive, adaptive, and sustainable community-based educational ecosystem.

Keyword: educational equity, artificial intelligence, SNPMB, community service, online learning

INTRODUCTION

Education is a fundamental instrument for improving human capital and expanding opportunities for better social and economic outcomes. Nevertheless, access to quality education remains uneven. Educational disparities involve not only the availability of educational institutions but also unequal access to learning resources, academic guidance, information, technology, and supportive learning environments. In Indonesia, socioeconomic conditions remain an important factor influencing educational opportunities, including access to higher education (Fadhil & Sabic-El-Rayess, 2021; Harahap et al., 2020). These disparities become particularly relevant during the transition from secondary to higher education, when students face competitive admission processes while having different levels of access to preparation resources and academic support.

This issue is particularly evident in preparation for the Seleksi Nasional Berdasarkan Tes (SNBT), one of the pathways within Indonesia's Seleksi Nasional Penerimaan Mahasiswa Baru (SNPMB). Success in the examination requires not only academic knowledge but also appropriate learning materials, structured preparation, regular practice, feedback, and effective learning strategies. Students who cannot afford commercial tutoring services or preparation materials may therefore face disadvantages before entering the examination itself. Educational equity in this context should consequently be understood not only as equal access to the examination, but also as equal opportunities to prepare for it.

Community-based educational outreach can provide an alternative approach to addressing these disparities. Outreach programs extend academic support beyond formal school settings and can provide additional opportunities for students facing educational barriers. A systematic review by Ní Chorcra et al., (2023) found that widening-participation outreach programs can contribute to expanding educational opportunities, while evidence from tutoring interventions demonstrates that structured academic support can improve student learning outcomes (Nickow et al., 2024). These findings indicate that community-based interventions combining accessible learning resources with structured academic support can contribute to reducing disparities in preparation for higher education.

At the same time, digital technology has expanded the ways in which educational resources and academic support can be delivered. Digital platforms can overcome geographical and temporal barriers, enabling students to access learning materials and educational services more flexibly. However, digitalization does not automatically eliminate educational inequality because differences in infrastructure, devices, connectivity, and digital literacy may persist. Thus, digital transformation

in education needs to be accompanied by efforts to ensure both accessibility and students' capacity to use technology effectively.

The development of Artificial Intelligence (AI) has created further opportunities for technology-enhanced education. AI can support learning through adaptive content, personalized recommendations, automated feedback, assessment, and learning analytics (Chen et al., 2020). Recent studies have particularly highlighted the potential of AI to personalize learning experiences. Hariyanto et al. (2025) emphasize the role of AI-supported adaptive learning in providing more personalized educational experiences, while (Luo et al., 2025) report positive effects of AI-assisted learning on student engagement and academic achievement. Similarly, Du Plooy et al. (2024) found that personalized adaptive learning can support academic progress and student engagement by responding to individual learning needs.

AI can also support students' ability to regulate their own learning. Self-regulated learning (SRL) involves setting goals, planning activities, monitoring progress, evaluating outcomes, and adjusting learning strategies. These processes are particularly important in online learning environments, where students assume greater responsibility for their learning. Lan dan Zhou (2025) found that AI applications, including chatbots and adaptive feedback systems, can support learner autonomy and self-regulation. However, AI should not simply function as an answer-generation tool. Without adequate digital literacy and critical thinking, excessive reliance on AI may reduce independent learning and encourage the uncritical acceptance of generated information. Therefore, AI should complement rather than replace human guidance and students' own cognitive processes.

These developments provide an important context for the evolution of TELISIK (Teras Belajar Asik), a community-based educational initiative initially established to support students preparing for the UTBK examination. Unlike conventional tutoring programs that primarily emphasize intensive academic instruction and examination performance, TELISIK combines structured online learning with direct human support from tutors recruited from various higher education institutions. Its previous implementation demonstrated promising outcomes: in 2024, 96 TELISIK participants took the UTBK examination, with 63 subsequently admitted to public higher education institutions. The program also involved 146 students and 12 tutors from various universities and incorporated structured learning, practice, feedback, and student engagement strategies. These experiences demonstrate the potential of TELISIK to provide accessible academic support beyond conventional paid tutoring.

However, existing tutoring and community-based learning programs generally remain centered on short-term academic achievement, particularly examination preparation. Such programs may support test readiness but often provide limited continuity after the examination and fewer opportunities for students to develop broader academic, digital, and professional competencies. This creates a gap between access to examination preparation and continuous educational development, particularly for students who need sustained support in pursuing further educational opportunities and preparing for changing academic and professional demands.

To address this gap, TELISIK was expanded into TELISIK+ 2026, an integrated community-based educational ecosystem based on a "high-tech meets high-touch" approach. The model combines technology-enabled learning with sustained human interaction, positioning AI and digital technologies as tools to expand access, flexibility, and personalization while retaining tutors and mentors as sources of academic guidance, motivation, and personal support. TELISIK+ 2026 consists of four interconnected programs: (1) the UTBK Book Assistance Equity Program, (2) the Online UTBK Learning Program, (3) the Scientific Writing, Research, and Publication Program, and (4) the AI-Based Educational Website Development Program.

The first two programs address students' immediate needs in accessing learning resources and preparing for SNPMB. The UTBK Book Assistance Equity Program reduces material barriers by providing free preparation books to selected students from senior high schools, Islamic senior high schools, and vocational high schools in South Sumatra, with 36 students selected as recipients in 2026. The Online UTBK Learning Program complements this support through structured academic instruction and mentoring without requiring students to rely on paid tutoring services. Together, these programs extend TELISIK's original mission of widening access to examination preparation.

TELISIK+ 2026, however, does not stop at examination success. The Scientific Writing, Research, and Publication Program expands the program toward academic capacity development by equipping students with research and scientific communication skills, including opportunities to produce nationally ISBN-registered works and pursue publication in accredited scientific journals. In parallel, the program provides support related to scholarship opportunities and students' future skill development, extending educational assistance beyond university admission toward longer-term academic and professional development. These components distinguish TELISIK+ from conventional tutoring models that typically end when the examination is completed.

The fourth component, the AI-Based Educational Website Development Program, is designed to extend the reach of TELISIK beyond its direct participants. The platform incorporates features such as an adaptive question bank, interactive learning videos, examination simulations, digital learning resources, and cognitive performance metrics. Through these features, technology is positioned not simply as a medium for delivering existing materials but as infrastructure for scalable and potentially personalized learning support. This component allows the educational benefits of TELISIK+ to reach a broader group of learners while complementing, rather than replacing, human tutoring and mentoring.

The research gap addressed by TELISIK+ 2026 therefore lies in the limited integration of equitable access to learning resources, human-centered academic mentoring, AI-supported learning, scholarship support, and academic and future-skill development within a single community-based educational ecosystem. Existing tutoring programs tend to prioritize examination preparation; digital learning initiatives may emphasize technological delivery without sustained human mentoring; and academic development programs are often separated from university entrance preparation. TELISIK+ 2026 bridges these fragmented approaches through its four interconnected programs. Its novelty lies specifically in the integration of a "high-tech meets high-touch" model that combines scalable AI-enabled learning infrastructure with human mentoring and extends educational support beyond examination outcomes toward scholarship opportunities, scientific competencies, and future-oriented skills.

Based on this research gap and novelty, this article aims to describe the implementation of TELISIK+ 2026 as an integrated community-based educational initiative combining educational equity, SNPMB preparation, human-centered mentoring, AI-supported learning, scholarship support, and academic capacity development. It further examines the contribution of each of the four programs in addressing students' educational needs and discusses the potential of TELISIK+ as an inclusive, adaptive, and sustainable educational ecosystem that extends beyond conventional examination-oriented tutoring.

IMPLEMENTATION METHOD

A. Activity Design and Evaluation Framework

Access to higher education in Indonesia remains structurally unequal. Students from lower socioeconomic backgrounds continue to be underrepresented in public universities despite the implementation of affirmative policies, partly because gaps remain between policy objectives and their implementation (Fadhil & Sabic-El-Rayess, 2021). Outreach programs conducted outside formal school settings have become a common response to this challenge, although evidence of their effectiveness remains limited and depends substantially on the evaluation designs employed (Ní Chorcóra et al., 2023).

This community engagement initiative consisted of four programs: the UTBK Book Assistance Equity Program, the Online UTBK Learning Program, the Scientific Writing and Publication Program, and the Artificial Intelligence (AI)-Based Educational Platform Development Program. Each program addressed a distinct barrier, namely the cost of learning resources, access to academic guidance and information on university admission, scientific capacity, and online learning infrastructure. The implementation of the four programs followed the *planning, organizing, actuating, and controlling* (POAC) framework.

The evaluation employed a descriptive-evaluative approach based on a single measurement point at the end of the program cycle, without baseline measurements or a comparison group. Consequently, the reported outcomes describe participants' level of readiness and the extent of program implementation rather than the magnitude of changes attributable to the intervention. The achievements of the four programs were assessed using the RE-AIM framework across five dimensions: *reach, effectiveness, adoption, implementation, and maintenance* (Glasgow et al., 1999). This framework was selected for its pragmatic nature and because it does not require all dimensions to be measured comprehensively, particularly in programs with limited evaluation resources (Glasgow et al., 1999). The description of each program followed principles of comprehensive intervention reporting to support potential replication by other implementers (Hoffmann et al., 2014).

B. Planning

The planning stage included the recruitment of tutors and implementation team members, cross-program coordination, and the establishment of targets for each program during the 2026 cycle. These targets included the quota for book assistance recipients, the allocation of 36 learning sessions across seven UTBK subtests, the scope of scientific writing materials, and the specifications of the website features to be developed. Coordination among the programs was necessary because all four programs shared the same participant base and activity schedule.

The target participants were Grade 12 students and graduates of senior high schools (SMA), Islamic senior high schools (MA), and vocational high schools (SMK) who intended to pursue higher education at public universities. Participants were recruited openly through TELISIK+'s official social media channels, without academic selection or participation fees. Cohort 6 recorded 70 registered participants, of whom 35 attended at least one learning session. The program was supported by 18 tutors from various higher education institutions, who were selected based on the alignment between their areas of expertise and the subtests they were assigned to teach. This self-selection recruitment mechanism has methodological implications. Participants who voluntarily register for an outreach program may already be more likely to pursue higher education; therefore, the observed outcomes cannot be fully separated from participants' pre-existing characteristics and motivations (Martin, 2024).

C. Organizing

The organizing stage involved preparing all resources and operational components required for the four programs. b prepared the procurement of UTBK question-bank books and established the eligibility criteria for recipients. The Online UTBK Learning Program developed a curriculum covering seven subtests, along with modules and thematic learning materials. The Scientific Writing and Publication Program prepared the article framework, assigned writing responsibilities, and developed writing guidelines for the implementation team. Meanwhile, the AI-Based Educational Platform Development Program developed a *practice-test platform* and a learning-material archive, which were subsequently utilized by the Online UTBK Learning Program. Thus, the outputs of the fourth program served directly as inputs for the implementation of the second program.

D. Actuating (Implementation)

TELISIK+ 2026 was conducted online from January 16 to April 20, 2026, through *Zoom Meetings* and the official TELISIK+ website, enabling participants from various districts and cities to take part in the program. The implementation phase began with participant *onboarding* on January 16, 2026, which also included the distribution of book assistance to 35 selected participants. The program then continued with 36 learning sessions using the *Material Presentation and Question Discussion* (M&S) format. Each session lasted 150 minutes, with a greater emphasis on question practice, consistent with evidence that intensive group-based tutoring can positively influence students' academic achievement (Nickow et al., 2024). All sessions were recorded and archived on the TELISIK+ platform to enable repeated access, as the use of video materials in learning has been associated with improved learning outcomes (Noetel et al., 2021).

Participant outcomes were assessed using a UTBK *practice test* independently developed by the implementation team. The instrument covered seven subtests in accordance with the UTBK structure and employed an *Item Response Theory* (IRT)-based scoring approach, with observed scores ranging from 350 to 1000. This approach was used because participants' ability estimates are based on item parameters rather than solely on the composition of test questions (Antara & Bastari, 2015). However, comparisons of scores across different test forms require separate equating procedures (Nisa & Retnawati, 2018), which were not implemented in this activity.

Supporting data were obtained from three sources: **(1)** screenshots from each session to verify program implementation and participant attendance; **(2)** administrative records, including registration lists and lists of book-assistance recipients; and **(3)** higher education admission outcomes based on participants' self-reported confirmations following the announcement of the 2026 SNBP and SNBT selection results.

E. Controlling

The controlling stage encompassed outcome assessment, data analysis, and reporting. These activities included administering the UTBK *practice test* through the previously developed platform, compiling participants' higher education admission outcomes, and documenting the implementation of all programs. The indicators collected included the number of books distributed, the implementation of learning sessions, *practice-test* scores, scientific writing outputs, and the utilization of website features.

The *practice-test* scores were cleaned before analysis because a score of 350 represented the lower bound of the scoring system rather than an actual measure of participant ability. Therefore, participants who received the minimum score on five or more subtests were considered not to have completed the test and were excluded from the score analysis.

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The reliability of the instrument was assessed using Cronbach's alpha coefficient based on scores from the seven subtests. This coefficient was interpreted as evidence of measurement reliability within a single test administration, rather than evidence that the instrument measured a single underlying dimension (Taber, 2018). Documentation and activity records were analyzed using a descriptive qualitative approach to describe program delivery within the *implementation* dimension.

The controlling stage concluded with the preparation of a scholarly article and the dissemination of the program results. This process also served as an output of the Scientific Writing Program, as the article was collaboratively prepared by the implementation team.

RESULTS AND DISCUSSION

A. Program 1: UTBK Book Assistance Equity Program

The UTBK Book Assistance Equity Program represents one of TELISIK+ 2026's initiatives to promote equitable access to learning resources for prospective participants in the National Selection Based on Test (SNBT). The availability of adequate learning resources is an important factor in supporting students' academic preparedness for the higher education admission process. However, some prospective participants still face difficulties in obtaining UTBK preparation books due to differences in economic conditions and access to educational resources. Such disparities may create unequal learning opportunities, highlighting the need for interventions that can expand access to learning resources more equitably. Therefore, the UTBK Book Assistance Equity Program was implemented to provide learning support for students in need through the free distribution of UTBK preparation books (Pravitasari et al., 2023).

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The program began with a selection process for prospective recipients based on criteria established by the TELISIK+ committee. The beneficiaries came from various senior high schools (SMA), Islamic senior high schools (MA), and vocational high schools (SMK) across South Sumatra Province, representing diverse socioeconomic and geographical backgrounds. During the implementation of TELISIK+ 2026, 36 TELISIK participants were selected as beneficiaries and received UTBK preparation book packages to support their independent learning throughout the SNBT preparation process. Documentation of the beneficiaries of the Book Assistance Program is presented in Figure 1.

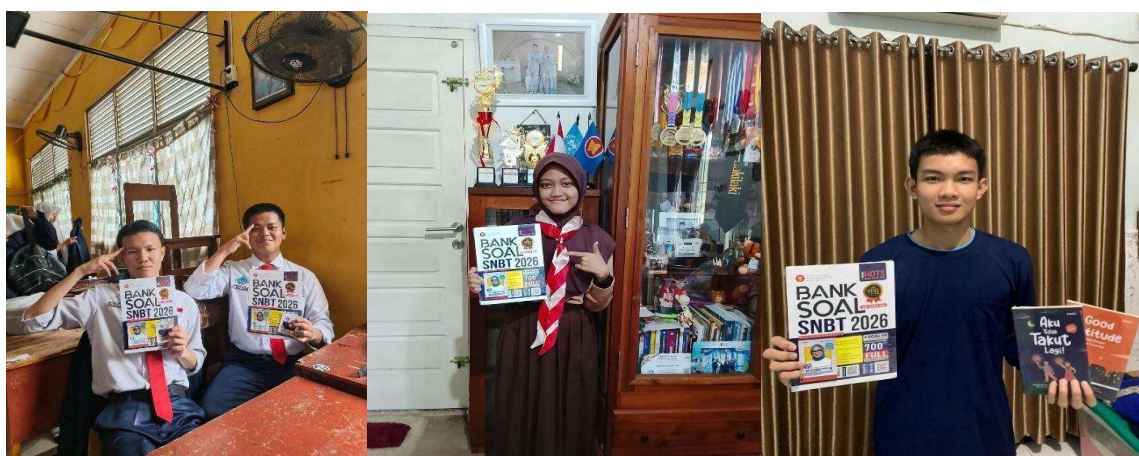


Figure .1 Distribution of TELISIK+ 2026 UTBK Preparation Books

Source: TELISIK+ Documentation (2026)

The implementation of the UTBK Book Assistance Equity Program demonstrates that the provision of physical learning resources remains relevant in supporting participants' academic preparation. Despite the growing availability of various digital learning media, books remain a systematic and accessible learning resource that can be reused without relying on electronic devices or an internet connection. For some participants, particularly those with limited access to paid learning services, book assistance provides an alternative learning resource that can be utilized continuously throughout the SNBT preparation period. Thus, the program not only functions as an in-kind assistance initiative but also represents an intervention aimed at expanding learning opportunities and promoting more equitable access to education (Yingsoon et al., 2025).

Based on the implementation outcomes, the UTBK Book Assistance Equity Program offers several strengths. First, the program expanded participants' access to quality learning resources, thereby helping reduce economic barriers to obtaining UTBK preparation books. Second, the recipients came from various schools across South Sumatra Province, indicating that the program reached participants from diverse backgrounds and was therefore aligned with the principle of equal learning opportunities. Third, the assistance could be utilized independently according to each participant's individual learning pace and needs, thereby encouraging the development of more structured learning habits.

Nevertheless, the program implementation still had several limitations that may serve as considerations for future program cycles. The number of available books remained constrained by the program's capacity and therefore could not reach all prospective participants in need. In addition, program effectiveness was primarily assessed based on the number of beneficiaries, while the extent to which the books were utilized throughout the learning process was not evaluated comprehensively. As a result, the program's impact on improving participants' academic preparedness could not yet be measured objectively and systematically.

In future implementation, the UTBK Book Assistance Equity Program could be developed to focus not only on book distribution but also on optimizing the utilization of these resources through a more structured learning support system. Each participant could be provided with a learning planner or learning roadmap to accompany the book, containing learning targets, a schedule for completing the learning materials, and self-assessment activities to facilitate a more systematic learning process. After completing specific topics, participants could take mini practice tests (mini tryouts) to assess their understanding while identifying competencies that still require improvement. The results could then serve as a basis for providing more personalized recommendations for learning materials according to each participant's individual needs.

Furthermore, participants' learning progress could be monitored periodically through a simple dashboard, enabling the organizing committee to evaluate the extent to which the books are being utilized and provide more targeted learning support. If participants continue to experience difficulties with particular topics, the learning process could be strengthened through small-group study circles that encourage discussion, collaboration, and the exchange of problem-solving strategies. Through this approach, the UTBK Book Assistance Equity Program is expected not only to expand access to learning resources but also to improve the quality of their utilization, thereby generating a more tangible impact on participants' preparedness for the SNBT.

B. Program 2: Online UTBK Learning Class Program

The Online Computer-Based Written Test (UTBK) Learning Class Program was the core program of Teras Belajar Asik (TELISIK+) 2026, targeting Grade 12 students and graduates of senior high schools and equivalent institutions. The program was designed to address two challenges faced by participants in preparation for the National Student Admission Selection (SNPMB): limited access to paid tutoring services and insufficient information regarding the admission selection mechanisms. The implementation of the program consisted of a series of activities, as described in the following sections.

1. Tutor Briefing and Participant Onboarding

The program began with an online *briefing* session for tutors to align their understanding of the program objectives, targets for the 2026 cycle, and teaching schedules according to their respective areas of expertise. This process resulted in the allocation of 36 sessions across seven subtests. The *Material Presentation and Question Discussion* (M&S) format was adopted as the instructional approach, with each session lasting 150 minutes. Tutors were given flexibility to determine the proportion of time allocated to material presentation and question discussion according to the characteristics of the topics being taught. The documentation of material presentations was also established as a requirement for each topic.

Participant *onboarding* was conducted online on January 16, 2026, under the theme “Succeeding in SNPMB 2026: Becoming a Freshman at Your Dream University.” The event also formally marked the opening of the Cohort 6 learning program. The materials covered the learning scheme and activity calendar for January–April 2026, as well as the values and strategic direction of TELISIK+. The program aimed to develop four core competencies among participants: critical thinking, information literacy, technological adaptability, and social responsibility, while also providing guidance on strategies for selecting appropriate study programs.

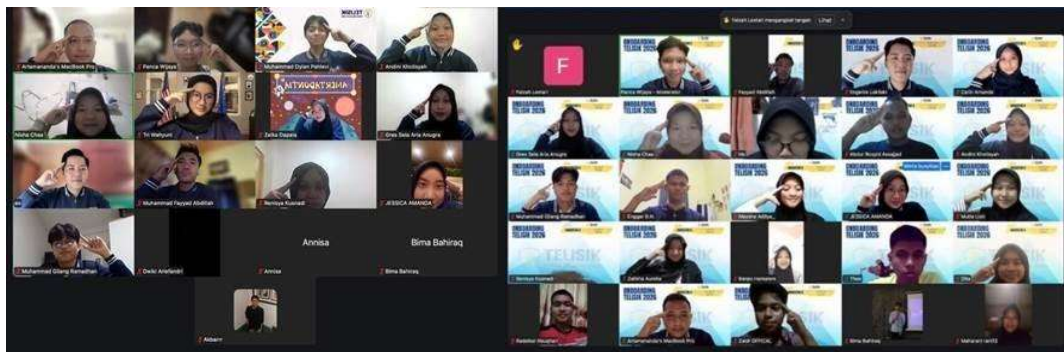


Figure .2 TELISIK+ 2026 Tutor Briefing

Source: TELISIK+ Documentation (2026)

2. Implementation of Learning Activities

The online learning sessions were conducted from January 19 to April 17, 2026, with a total of 36 scheduled sessions. The proportion of theoretical instruction was limited, while greater emphasis was placed on question discussion and practice. This approach was adopted because the primary challenge faced by UTBK participants is not merely understanding concepts, but rather developing the speed and accuracy required to solve questions within the allocated time.

The M&S format, which allowed tutors to determine the proportion of time allocated to material presentation and question discussion, enabled a greater emphasis on practice in subtests that

required extensive problem-solving, such as Quantitative Knowledge and Mathematical Reasoning. All sessions were recorded as *Learning Videos* on the TELISIK+ platform and could be accessed repeatedly to accommodate participant absences and support the review of learning materials. Documentation of the learning activities is presented below.



Figure 3 TELISIK+ 2026 Learning Activities
Source: TELISIK+ Documentation (2026)

3. UTBK Practice Test and Program Closing

The TELISIK UTBK *practice test* was conducted from April 1 to April 19, 2026, covering seven subtests and employing an *Item Response Theory* (IRT)-based scoring system with a score range of 350–1000. Of the 30 participants who accessed the practice test, 24 completed all seven subtests, achieving a mean score of 616.3 and demonstrating **high reliability, with a Cronbach's alpha coefficient of 0.897**. The remaining six participants did not complete the test.

The highest mean score was obtained in General Knowledge and Understanding, with an average of 646.4, while the majority of participants scored within the 550–700 range, which represents a competitive range for admission to many programs at Indonesian public universities.

The program concluded through a *Zoom Meeting* on April 20, 2026, during which the top three participants were announced: Aulia Syalsabillah (834.4), Zalikha Aurelia Putri (772.0), and Radeikal Abuqhari (715.4). The closing session also included a joint prayer ahead of the UTBK examination. The distribution of the *practice-test* results is presented in Figure 4.

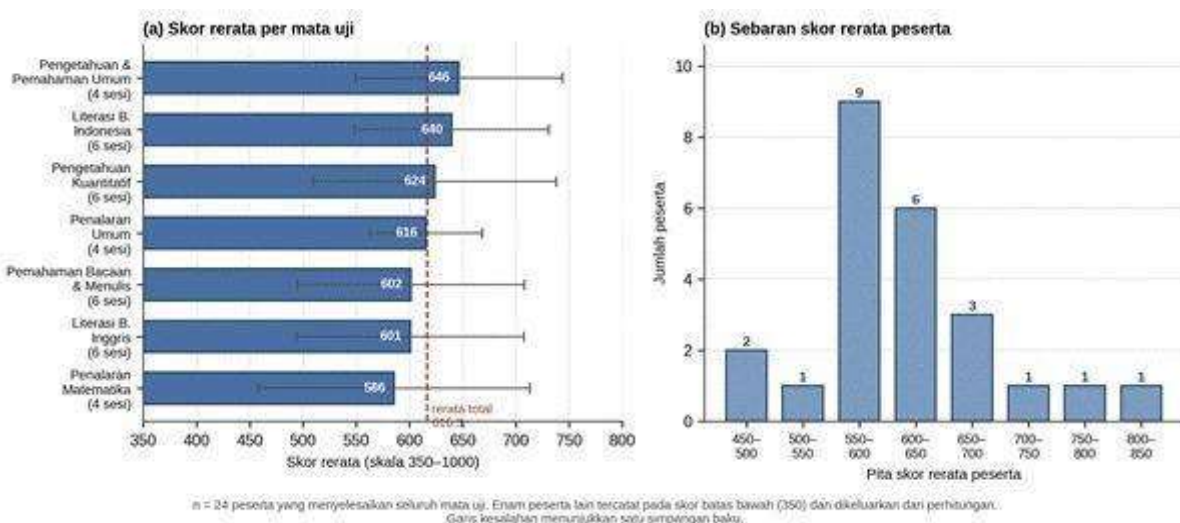


Figure .4 TELISIK+ 2026 Participants' UTBK Practice Test (TOSIK) Results

Source: TELISIK+ Data, processed (2026)

4. Participant Outcomes in Higher Education Admission Selection

A total of 34 TELISIK+ participants were admitted to public higher education institutions through the 2026 National Selection Based on Achievement (SNBP), the results of which were announced on March 31, 2026. The distribution indicates that participants' choices were not concentrated in a single type of program, with 24 participants admitted to academic programs and seven to vocational programs. In line with emerging workforce demands, six participants (19.4%) were admitted to computer- and digital-related fields, including Computer Engineering Technology, Computer Systems, Information Systems, and Digital Business. Regarding participants' school backgrounds, SMA Negeri 1 Indralaya contributed the largest number, with 14 participants (45.2%). The distribution of receiving institutions and participants' school origins is presented in Figure 4.

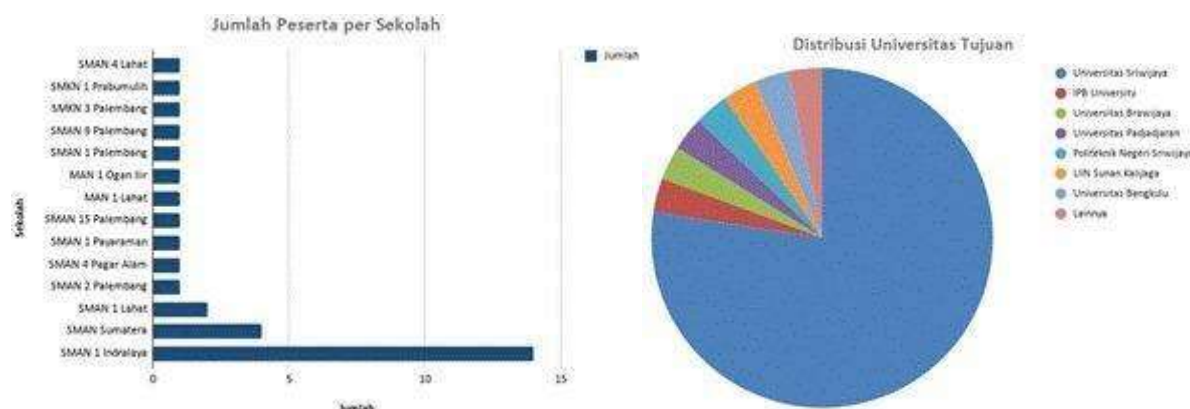


Figure .5 TELISIK+ Participant Outcomes through the 2026 SNBP Pathway

Source: TELISIK+ Data, processed (2026)

C. Program 3: Scientific Writing, Research, and Publication

The sustainability of a community service movement should not be measured solely by the extent of its physical presence in the field, but also by the extent to which the knowledge generated through such experiences can be documented, methodologically examined, and disseminated as public discourse with long-term impact. TELISIK+ recognizes the importance of this transformation. Beyond serving as a platform for learning assistance and UTBK preparation, TELISIK+ has progressively evolved into an incubation laboratory for literacy, incremental research, and scientific publication, connecting various elements of the educational ecosystem, including academics, policymakers, practitioners, teachers, university students, and educational volunteers.

The development of a knowledge-based community movement provides a concrete means of demonstrating that social initiatives combined with academic expertise can generate a far greater, measurable, and replicable force for transformation across different regions of Indonesia. The initiative to develop this program was grounded in the premise that every dynamic, challenge, and solution identified while supporting students in local communities should be elevated to a broader level of academic discourse. By cultivating a sustained practice of documenting these experiences through scholarly writing, TELISIK+ transforms local narratives into instruments for policy advocacy and formal academic references. The team's efforts in coordinating the writing process, fostering cross-disciplinary collaboration, and overseeing a rigorous peer-review process ultimately produced high-quality outputs recognized at the national level, including a comprehensive book publication and accredited scholarly journal publications.

1. Documenting Experiences and Formulating Ideas: Publication of a National ISBN-Registered Book

The development of the scientific writing program reached one of its major milestones when TELISIK+ successfully consolidated ideas, empirical experiences, and critical reflections from various figures and practitioners into a comprehensive book. This national anthology, entitled **Jejak Perjuangan di Peta Pendidikan Indonesia: Membangun Sokoguru Bangsa** (Traces of Struggle on the Map of Indonesian Education: Building the Pillars of the Nation) (Figure 6), was officially published under ISBN 978-623-127-790-9 on the occasion of National Education Day, May 2, 2026, by Literasi Nusantara Publisher, Malang (Lakilaki et al., 2024)



Figure .6 Cover and Structure of the Anthology **Jejak Perjuangan di Peta Pendidikan Indonesia: Membangun Sokoguru Bangsa**, Developed through Multidisciplinary

Collaboration among the TELISIK+ Team (ISBN: 978-623-127-790-9, Literasi Nusantara Publisher).

The book represents a collaborative synthesis of ideas from nine authors representing diverse sectors of Indonesia's education and national policy landscape. The contributors include Eogenie Lakilaki (Edu-Literacy Community), Artamananda (Edu-Literacy Community), Amaliah Sobli (Member of the Regional Representative Council of the Republic of Indonesia/DPD RI), Achmad Soediro (Lecturer at Universitas Sriwijaya), Annisa Fatihah Salsabila (Teacher at SDIT Rabbani), M. Fahmi Hidayat (BAZNAS Indonesia), Dwi Ariyansyah (Edu-Literacy Community and National Library of Indonesia/Perpusnas), Ahmad Adityawarmansyah (Teacher at SMAN 1 Lahat), and Carin Amanda (Student at PKN STAN).

The curation and development of the book manuscript integrated historical, philosophical, and sociological approaches. It invites readers to trace the roots of educational struggles from traditional periods to the era of digital disruption, emphasizing how local wisdom values such as simplicity, community self-reliance, and social solidarity—including the potential of zakat and philanthropy—can serve as fundamental pillars of nation-building. The publication provides tangible evidence that direct interaction with communities can be transformed into a rich intellectual artifact, inspiring readers by demonstrating that social initiatives can have a lasting impact when documented through strong and systematic literacy practices.

2. Scientific Synthesis and Strategic Dissemination: SINTA 4 Journal and the National Development Planning Magazine

The program's development did not stop at general literacy activities. Leadership in program development continued to advance into the realm of applied research recognized by the formal academic community. All adaptive technologies designed and implemented throughout the community service process were scientifically evaluated using measurable and accountable approaches to ensure the validity and credibility of the findings.

a. Academic Validation through a SINTA 4-Accredited Journal

The technology-based pedagogical innovation developed by TELISIK+ was documented and successfully passed the publication review process in the Journal of Information System Research (JOSH) (e-ISSN: 2686-228X, Vol. 7 No. 4, July 2026 edition). The journal is a scientific periodical accredited SINTA 4 based on the Decree of the Minister of Education, Culture, Research, and Technology No. 72/E/KPT/2024 afa(Artamananda et al., 2026). The scientific article entitled "Combining Generative AI and Scheduling Algorithms for Personalized Learning Powered by TELISIK", which was also disseminated under the theme "Transcending 'One Size Fits All' Education," was collaboratively authored by Artamananda, Eogenie Lakilaki, Syakillah Nachwa, Muhammad Gilang Ramadhan, Amaliah Sobli, Annisa Fatihah Salsabila, and Bagus Ramadhan (Artamananda et al., 2026).

The article examines in depth how the utilization of generative artificial intelligence (Generative AI) combined with scheduling algorithms can overcome the limitations of conventional, standardized "one-size-fits-all" educational approaches. Through the framework developed by TELISIK, technology is utilized to map each learner's unique needs, develop adaptive learning pathways, and provide high-quality, inclusive, and accountable learning support for students without being constrained by geographical or financial barriers.

b. Strategic Opinion Dissemination through Simpul Perencana Magazine (Bappenas/PPN)

To ensure that the outcomes of this community service initiative resonate at the level of national policy formulation, the program's narratives and field findings were also disseminated through Simpul Perencana Magazine Volume 52 (August 2025 Edition), published by Indonesia's national development planning institution. The article entitled "Future Literacy: Saat Gen Z Ambil Peran dalam Peta Jalan Pembangunan Nasional" (Future Literacy: When Gen Z Takes Part in the National Development Roadmap), written by Eogenie Lakilaki (First Expert Planner, **National Library of the Republic of Indonesia**), examines the strategic role of young people in navigating the direction of knowledge-based development.



Figure 7 Integration of Technology and Youth Activities in Simpul Perencana Vol. 52: (Left) Integration of an AI-Based Adaptive UTBK Question Bank into the TELISIK Portal; (Right) Collaboration between Digital Learning and Community Literacy Discussions in Preparing a Future-Ready Generation (Lakilaki et al., 2024).

The substantive connection between the article's narrative and the realities observed in the field is explicitly illustrated in Figure 7. The photograph on the left shows the technical process of integrating an AI-based UTBK practice question bank into the www.telisik-go.my.id portal, while the photograph on the right captures the active interaction between volunteers and students in utilizing the digital ecosystem. This visualization demonstrates that the use of AI within the TELISIK environment is not merely a technological trend, but rather an educational empowerment tool designed by Generation Z to address disparities in the Gross Enrollment Rate (GER) in higher education across regions. This approach combines high-tech digital learning with high-touch human interaction. Through physical literacy spaces, TELISIK+ demonstrates that local communities can generate world-class solutions that deliver tangible and measurable impacts while inspiring similar initiatives elsewhere.

Through the successful integration of book publications, a SINTA 4-accredited scientific journal, and national policy-oriented opinion, the TELISIK+ Scientific Writing, Research, and Publication Program has established its position not merely as an implementer of community service activities, but also as a pioneer of an intellectual movement capable of transforming social action experiences into valuable knowledge legacies for the advancement of education in Indonesia.

D. Program 4: Development of an Artificial Intelligence-Based Educational Website

As part of its digital transformation, TELISIK developed an *Artificial Intelligence* (AI)-based website to provide an adaptive and interactive learning experience. This platform leverages educational technology to overcome spatial and temporal barriers, promoting independent learning

and expanding access for students from diverse backgrounds, particularly those unable to access conventional tutoring.

This program was developed in response to a fundamental challenge commonly faced by prospective participants of the Computer-Based Written Examination (*Ujian Tulis Berbasis Komputer/UTBK*): limited access to high-quality practice materials that are aligned with the latest examination standards and content. This accessibility gap is particularly pronounced among students who are not affiliated with commercial tutoring institutions (Harahap et al., 2020). Adequate and representative practice materials play an essential role in preparing students for high-stakes examinations. Empirical evidence suggests that repeated and structured practice is closely associated with improved conceptual understanding, problem-solving speed, and academic performance (Xu et al., 2024). On the other hand, the conventional or manual development of test items requires substantial investments of time, human resources, and other resources (Das et al., 2021). These constraints make it difficult to maintain a dynamic, diverse, and continuously updated question bank capable of keeping pace with changes in examination patterns.

The use of *Artificial Intelligence* (AI) offers a strategic approach to addressing these barriers to educational access. Through computational approaches, AI facilitates *Automated Question Generation* (AQG), enabling the automatic, standardized, and large-scale production of assessment items (Kurdi et al., 2020). This fosters independent learning beyond spatial and temporal constraints, minimizing reliance on physical tutors. To establish a holistic educational ecosystem with adaptive assessments and analytics (Chen et al., 2020). Building on this foundation, the TELISIK platform was specifically developed by integrating essential features, including an adaptive question bank, interactive learning videos, *real-time* examination simulations, a digital repository, and cognitive performance metric calibration (Artamananda et al., 2026). These five core features work together to provide a comprehensive learning experience and are described in greater detail in the following sections.

1. UTBK Question Bank

The UTBK Question Bank is an open-access repository designed to expand learning opportunities for prospective public higher education (*Perguruan Tinggi Negeri/PTNs*) applicants without financial barriers. To maintain quality, AI-generated test items continuously undergo a validation protocol using a similarity index to determine publication eligibility. During the initial testing phase (Artamananda et al., 2026), the system generated an initial total of 1,663 items, with the eligibility rates for each UTBK subtest presented in descending order in Table 1.

Subtest	Number of Items	Eligibility Rate (%)
Quantitative Knowledge (PK)	162	96.3
Mathematical Reasoning (PM)	126	92.9
General Knowledge and Understanding (PPU)	280	91.4
General Reasoning (KPU)	151	79.5
English Literacy (LBE)	270	17.8
Indonesian Literacy (LBI)	291	15.5
Reading and Writing Comprehension (PBM)	252	9.5
Total	1,663	50.0

Source: Artamananda et al. (2026).

The post-validation results revealed differences in performance across subtests. The numerical and structured subtest clusters demonstrated high effectiveness, with originality rates exceeding 91%. In contrast, subtests involving longer narrative texts showed a substantial increase in detected duplication. However, this finding was attributed to false positives caused by the limitations of the lexical similarity algorithm, which was overly sensitive to overlapping vocabulary within similar topics, rather than indicating poor output quality. As the AI system continues to be refined, the dynamic question bank has continued to expand. To date, the system has archived 2,273 test items, proportionally distributed across the seven UTBK subtest clusters. The distribution of items and the website interface are presented in Figure 8.

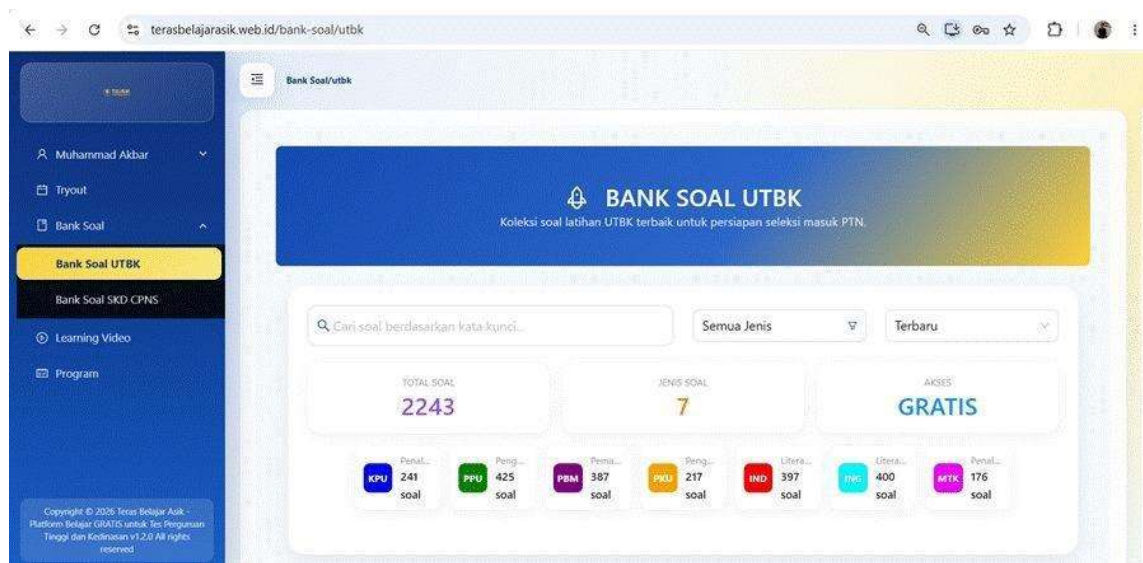


Figure .8 User Interface of the TELISIK AI-Based Website Platform

To optimize user convenience, the system interface is equipped with adaptive navigation tools that allow learners to filter questions by keywords, subtest type, and calibrated difficulty level. Through this extensive, validated, and fully free database, the TELISIK platform strategically facilitates learners' access to valid practice materials, thereby supporting their preparation and increasing their prospects of gaining admission to their target higher education institutions.

2. Online Learning Videos

The Online Learning Videos feature serves as a digital repository archiving UTBK virtual sessions, utilizing cohort-based filtering for systematic organization. Its interface employs a card-based layout integrated with YouTube, enabling participants to easily navigate and replay materials independently. Further pedagogical details are discussed in the Online Learning Program section, and the complete archive is accessible at: <https://www.terasbelajarsik.web.id/bank-soal/utbk>.

3. Artificial Intelligence-Based UTBK Practice Test

The UTBK Practice Test feature integrates generative *Artificial Intelligence* (AI) to dynamically produce test items and comprehensive explanations. Validated in the *Journal of Information System Research* (JOSH, Vol. 7, No. 4, July 2026), this system employs the *Item Response Theory* (IRT) approach to replicate national testing standards. Rather than using static

calculations, participant scores are dynamically calibrated based on item difficulty parameters and the overall population's response accuracy patterns.

These simulations are managed through a centralized website dashboard, which has successfully facilitated three periodic cycles: TELISIK Practice Tests 2024, 2025, and 2026. Systematically configured to operate between March and April, this automated scheduling mechanism demonstrates the platform's reliability in continuously managing large-scale annual evaluations.

4. TELISIK Digital Library

The Digital Library serves as an open-access repository designed to foster literacy and broaden students' motivational perspectives beyond technical exam preparation. Currently, the system archives three internally produced works within the "Motivation and Self-Development" category: *Generasi Emas Sriwijaya: 17 Perjalanan Inspiratif Agen*, *Dari Nol ke Goal: Mimpi Gratisan ala TELISIK*, and *Jejak Perjuangan di Peta Pendidikan Indonesia*.

The library's interface features a catalog displaying comprehensive metadata (cover image, title, author, pages, and year) alongside dedicated navigation tools for searching by title, author, or category. Furthermore, a *Call-to-Action* (CTA) button allows users to read documents directly within the platform. This seamless integration eliminates the need for external applications, maintaining student focus and supporting a sustainable, self-directed learning ecosystem.

5. CPNS 2026 Basic Competency Test Question Bank

Expanding its service coverage, TELISIK introduced an open-access CPNS 2026 Basic Competency Test (SKD) Question Bank. The repository currently archives 1,950 items across three core assessment clusters: 650 *National Insight Test (TWK)*, 660 *General Intelligence Test (TIU)*, and 640 *Personal Characteristics Test (TKP)* questions. The feature and its detailed item distribution are accessible at: <https://www.terasbelajasik.web.id/bank-soal/skd-cpns>.

The complete cycle of platform design, technical implementation, and operational evaluation is published in the *Journal of Information System Research (JOSH, Vol. 7, No. 4, July 2026; edition (Artamananda et al., 2026)*. This publication serves as a tangible program output and reflects academic accountability, ensuring the system's development is grounded in rigorous scholarly principles.

6. Platform Development Method

The platform engineering methodology was implemented through four systematic stages (Artamananda et al., 2026):

- System Initialization: UTBK-SNBT syllabus analysis and domain-specific prompt engineering aligned generated items with target cognitive domains.
- Automated Question Generation: An LLM-integrated scheduler periodically generated question variations and explanations.
- Quality Control and Validation: Duplication screening, expert tutor curation, and phased publication were implemented.
- Dynamic Calibration: Difficulty weights were automatically adjusted using historical accuracy metrics.

Through this procedural architecture, the system is capable of maintaining a large-scale question-generation cycle while preserving quality and content integrity.

7. Platform Outcomes and Utilization

The primary metric used to assess the platform's effectiveness was user acquisition reach. From the initiation of operations in March 2024 through July 2026, the system database recorded 551 verified active users. The growth of the user base did not occur linearly but instead exhibited a seasonal fluctuation pattern correlated with the academic calendar. Further details regarding fluctuations and the growth trajectory of the user base over time are presented in Figure 9.

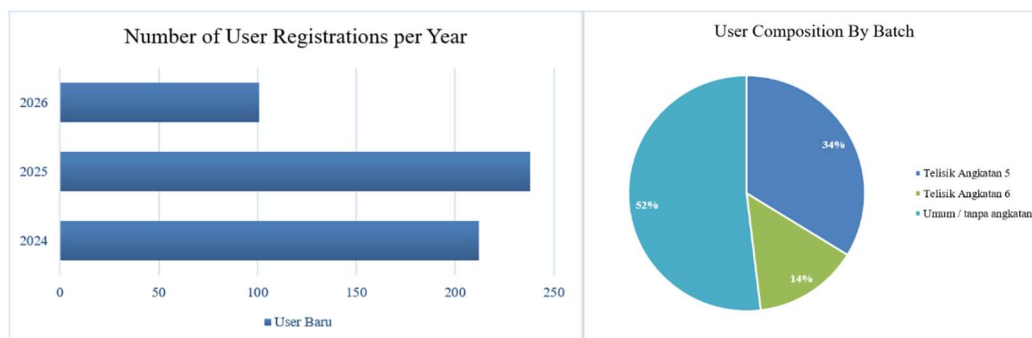


Figure .9 Growth of Users on the TELISIK AI-Based Website Platform (March 2024–July 2026)

As illustrated in Figure 9, the platform demonstrates strong registration traction, with new user accumulation peaking in 2025. This consistent growth indicates positive acceptance and utilization. To sustain this momentum, broader dissemination of the TELISIK+ platform is recommended **at the start of each academic year to** continuously increase student penetration.

The user composition (Figure 9) further reveals a diverse distribution among the 551 registered users. The majority (52%) comprises the general public, while the remaining 48% are internal TELISIK participants (34% from Cohort 5 and 14% from Cohort 6). This distribution demonstrates the platform's successful reach beyond its internal community. Moving forward, system development will focus on enhancing the analytics architecture specifically tracking learning duration and question completion rates to enable a more data-driven evaluation of participants' learning performance.

Conclusion

TELISIK+ 2026 demonstrates the potential of a community-based educational ecosystem that integrates equitable access to learning resources, academic mentoring, scientific capacity building, and digital innovation. Through its *high-tech meets high-touch* approach, the program combined UTBK book assistance, online learning, scientific writing and publication, and an AI-based educational platform. The program delivered 36 online learning sessions across seven UTBK subtests with the support of 18 tutors. Among the participants who completed all tryout subtests, the average score was 616.3, with high instrument reliability (*Cronbach's alpha* = 0.897). In addition, 34 participants were admitted to public universities through the 2026 SNBP pathway. The TELISIK platform further strengthened access to independent learning by providing 2,273 UTBK questions, 1,950 SKD questions, and services for 551 verified users. Meanwhile, the writing and publication program transformed community experiences into intellectual outputs, including books, scientific

publications, and policy-oriented writings. Overall, TELISIK+ highlights how the integration of learning access, human-centered mentoring, community collaboration, and AI technology can support a more inclusive, adaptive, and sustainable educational ecosystem.

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REFERENCE

- Antara, A. A. P., & Bastari, B. (2015). Penyetaraan vertikal dengan pendekatan klasik dan item response theory pada siswa sekolah dasar. *Jurnal Penelitian Dan Evaluasi Pendidikan*, 19(1), 13–24.
- Artamananda, Lakilaki, E., & Nachwa, S. (2026). Combining Generative AI and Scheduling Algorithms for Personalized Learning Powered by TELISIK. *Ogan Ilir Jl. Raya Palembang-Prabumulih No.KM*, 7(4), 52–53. <https://doi.org/10.47065/josh.v7i4.10356>
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *IEEE Access*, 8, 75264–75278.
- Das, B., Majumder, M., Phadikar, S., & Sekh, A. A. (2021). Automatic question generation and answer assessment: a survey. *Research and Practice in Technology Enhanced Learning*, 16(1), 5.
- Du Plooy, E., Casteleijn, D., & Franzsen, D. (2024). Personalized adaptive learning in higher education: A scoping review of key characteristics and impact on academic performance and engagement. *Heliyon*, 10(21).
- Fadhil, I., & Sabic-El-Rayess, A. (2021a). Providing equity of access to higher education in Indonesia: A policy evaluation. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 57–75.
- Fadhil, I., & Sabic-El-Rayess, A. (2021b). Providing equity of access to higher education in Indonesia: A policy evaluation. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 57–75.
- Harahap, E. S., Maipita, I., & Rahmadana, M. F. (2020a). Determinant analysis of education inequalities in Indonesia. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 3(2), 1067–1082.

- Harahap, E. S., Maipita, I., & Rahmadana, M. F. (2020b). Determinant analysis of education inequalities in Indonesia. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 3(2), 1067–1082.
- Hariyanto, Kristianingsih, F. X. D., & Maharani, R. (2025). Artificial intelligence in adaptive education: a systematic review of techniques for personalized learning. In *Discover Education* (Vol. 4, Number 1). Discover. <https://doi.org/10.1007/s44217-025-00908-6>
- Kurdi, G., Leo, J., Parsia, B., Sattler, U., & Al-Emari, S. (2020). A systematic review of automatic question generation for educational purposes. *International Journal of Artificial Intelligence in Education*, 30(1), 121–204.
- Lakilaki, E., Artamananda, & Fatihah Salsabila, A. (2024). *Eksplorasi Peran Gamifikasi Dan Motivasi Dalam Dinamika Utbk Di Perguruan Tinggi Negeri Indonesia*.
- Lan, M., & Zhou, X. (2025). A qualitative systematic review on AI empowered self-regulated learning in higher education. *Npj Science of Learning*, 10(1). <https://doi.org/10.1038/s41539-025-00319-0>
- Luo, J., Zheng, C., Yin, J., & Teo, H. H. (2025). Design and assessment of AI-based learning tools in higher education: a systematic review. In *International Journal of Educational Technology in Higher Education* (Vol. 22, Number 1). Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1186/s41239-025-00540-2>
- Martin, P. (2024). Do participants in widening participation outreach programmes in England progress to selective universities at a higher rate than would otherwise be expected? *British Educational Research Journal*, 50(4), 1962–1982.
- Ní Chorca, E., Bray, A., & Banks, J. (2023). A systematic review of widening participation: Exploring the effectiveness of outreach programmes for students in second-level schools. *Review of Education*, 11(2), e3406.
- Nickow, A., Oreopoulos, P., & Quan, V. (2024). The promise of tutoring for PreK–12 learning: A systematic review and meta-analysis of the experimental evidence. *American Educational Research Journal*, 61(1), 74–107.
- Nisa, C., & Retnawati, H. (2018). Comparing the methods of vertical equating for the math learning achievement tests for junior high school students. *REiD (Research and Evaluation in Education)*, 4(2), 8.
- Noetel, M., Griffith, S., Delaney, O., Sanders, T., Parker, P., del Pozo Cruz, B., & Lonsdale, C. (2021). Video improves learning in higher education: A systematic review. *Review of Educational Research*, 91(2), 204–236.
- Pravitasari, P. D., Mahfud, H., & Supianto, S. (2023). Implementasi proyek penguatan profil pelajar pancasila (P5) di sekolah dasar. *Didaktika Dwija Indria*, 11(2), 35–40.
- Taber, K. S. (2018). The use of Cronbach’s alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273–1296.
- Yingsoon, G. Y., Yiming, C., Suyan, Z., Haiyan, Z., & Xiaoyao, T. (2025). Elevating equity in education: programmatic strategies for supporting disadvantaged learners. In *Mitigating*

Learner Disadvantages in Teaching and Learning (pp. 29–58). IGI Global Scientific Publishing.