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EVALUATION OF THE IMPLEMENTATION OF THE AGILE EDUCATION FRAMEWORK IN DEVELOPING STUDENTS' ACADEMIC RESILIENCE AT PKBM FLEXI SCHOOL

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ABSTRACT
The Agile Education Framework is seen as an innovative approach to supporting students' academic resilience, but its effectiveness needs to be systematically evaluated through the CIPP model, as implemented at PKBM Flexi School. This study aims to evaluate the application of the Agile Education Framework in developing students' academic resilience at PKBM Flexi School through the CIPP (Context, Input, Process, Product) evaluation model. Qualitative research was conducted involving the principal, teachers, and students at PKBM Flexi School, Tangerang, Indonesia. Interviews were used to collect data. Source triangulation techniques were used to check the validity of the data. Data were analyzed using interactive analysis through data reduction, data presentation, and drawing and testing conclusions. The results showed that the implementation of Agile Education was considered very good in the context aspect because it was in accordance with the learning needs of the current era. In the input aspect, human resources have met the qualifications despite facing constraints related to facilities and funding. In the process aspect, teachers have been able to overcome challenges in the classroom through effective learning. In the product aspect, students showed significant improvements in academic resilience, academic achievement, and non-academic. Overall, the evaluation of the implementation of the Agile Education Framework has a positive contribution to the development of students' academic resilience.

INTRODUCTION

Indonesia's young generation is currently experiencing a worrying phase, particularly regarding a lack of mental resilience. However, this isn't unique to Indonesia, but is affecting young people globally. The term

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"strawberry generation" first emerged and eventually went viral across the globe. The current generation is likened to a strawberry, which looks beautiful and attractive but has low stamina and is easily damaged (Aulia et al., 2022). Uncertainty about future job needs also creates anxiety for the younger generation in determining career choices in the future (Putri et al., 2024).

The various conditions mentioned above cause some young people to be unable to withstand various social pressures. As a result, they struggle to face global competition. They have fragile mental resilience when facing challenges. Despite their creativity, the Strawberry Generation tends to give up easily, is easily hurt, is selfish, and is pessimistic about their future (Aulia et al., 2022; Kasali, 2017).

The younger generation needs resilience, especially in academics, to become intelligent, creative, and resilient young people. Resilience is the capacity for individuals to bounce back from setbacks and recover from adversity (Setyoso, 2013). More than just the ability to survive, resilience enables a person to recover from painful wounds, take control of their life, and move on with love and compassion (Lestari, 2016). Academic resilience has a significant impact on the process of achieving and maintaining competencies. Developing students' academic resilience can be a crucial strategy for improving educational outcomes. Furthermore, resilience also serves as a tool for students to face future challenges. Therefore, schools play a crucial role in enhancing academic resilience and supporting the achievement of required competencies.

The Flexi School Community Learning Center (PKBM) has chosen the Agile Education Framework as the philosophy and methodology applied in its learning activities. The Agile Education Framework aims to increase flexibility, responsiveness, and collaboration in the learning process. The Agile Education Framework involves the use of short iterations to design and deliver learning materials, provide continuous feedback from students, and promote teamwork and rapid response to change. This approach allows teachers and students to adapt to needs and developments throughout the learning process (López-Alcarria et al., 2019).

To obtain comprehensive evaluation results, the authors conducted evaluations at each stage using the CIPP (Context, Input, Process, and Product) evaluation model. Stufflebeam states that the CIPP evaluation model is comprehensive and has two main functions: formative and summative. The formative function aims to provide information that can be used in program improvement and development. Meanwhile, the summative function plays a role in providing a basis for consideration in assessing the success or continuation of a program (Stufflebeam & Coryn, 2014). This model was chosen because of its unique flexibility. Thus, the CIPP model serves as a comprehensive evaluation framework that guides both formative and summative evaluations of Agile Education Framework programs.

Previous research has shown that implementing Agile methods in higher education can improve students' understanding of the material, practical skills, and valuable experiences (Neumann & Baumann, 2021). In sports teaching and learning, integrating Agile management principles and technology can improve learning outcomes, training, and performance in the long term by implementing adaptive management and appropriate technology (Cojocaru et al., 2022a). An evaluation conducted by Maghfirah and Suranto (2023) on the implementation of Agile methods for software development processes by startup teams in Indonesia demonstrated the advantages of Agile, including its speed, cost-effectiveness, flexibility, and iterative nature. Previous research has shown that the Agile Education Framework can increase learning flexibility, collaboration, and student engagement in the learning process (Carroll et al., 2023; Denning, 2018).

In the educational context, the agile approach is considered relevant to address the diverse and rapidly changing dynamics of student learning needs (Sharp et al., 2020). Meanwhile, studies on academic resilience generally emphasize psychological factors, social support, and adaptive learning strategies in formal education (Cassidy, 2016; Martin & Marsh, 2006). However, research specifically examining the relationship between the implementation of the Agile Education Framework and the development of student academic resilience is still very limited, particularly in non-formal educational settings such as Community Learning Centers (PKBM). Furthermore,

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existing research focuses primarily on measuring learning outcomes or student perceptions, without conducting a comprehensive evaluation of the context, input, process, and product of the framework's implementation (Stufflebeam & Zhang, 2017). Therefore, there is a research gap that requires a systematic evaluation of the implementation of the Agile Education Framework using the CIPP model to obtain a comprehensive picture of its effectiveness in developing students' academic resilience at PKBM Flexi School.

METHOD

Qualitative research was used in this study. Bogdan and Taylor in state that qualitative research is a research procedure that produces descriptive data in the form of behavior and written and oral statements from individuals who are the subjects of the research (Taylor et al., 2015). This research was conducted at the Flexi School Community Learning Center (PKBM), located in South Tangerang City, Banten 15224.

The research subjects were informants, namely people trusted by the researcher to be respondents or as a source of accurate information for the completeness of research (Satori & Komariah, 2009). In determining the research subjects, the researcher applied a purposive sampling technique. According to Winarsunu (2017)), purposive sampling is used when the selected sample has predetermined characteristics. This technique was chosen because there are a number of important considerations that need to be considered to suit the objectives and needs of the research to be conducted.

The data collection technique in this study was obtained through interviews. Interviews were conducted to obtain results based on the focus of the problem regarding student resilience. Interviews were conducted directly with the principal and three teachers at the Flexi School Community Learning Center (PKBM). Data analysis is the process of systematically processing and compiling data obtained through field notes, interviews, and documentation. Qualitative data analysis was conducted interactively through stages that include data reduction, data presentation, and drawing and testing conclusions (Miles et al., 2014).

RESULT AND DISCUSSION

Result

This study used the descriptive CIPP (Context, Input, Process, and Product) approach as its evaluation framework. The following is an explanation of each approach used as follows.

Context

The main driver of the context component is an awareness of the mismatch between conventional education systems and students' potential and interests. Mr. A stated, "Flexi School aims to implement an approach where students can gain independence and have the opportunity to foster a passion for learning."

This explanation is also supported by the principal's statement that Agile Education is very much in line with the spirit of the Independent Curriculum which focuses on students' learning freedom,

"in Agile Education we strive to realize the achievement targets... the curriculum is intelligent, mature, spiritual... so I think the implementation of Agile is in line with the Independent Curriculum."

Another teacher, Mr. J, also added that Agile is used "to humanize humans, how they can be themselves."

One key factor is the alignment of the Agile approach with the core values of PKBM Flexi School, which are to develop students who are mature, independent, and possess spiritual awareness and social responsibility. PKBM Flexi School aims to develop children who understand their purpose in life (especially in learning) and are self-managed. This vision strongly supports the use of an Agile framework that places students at the center of decision-making in the learning process.

Component

Based on the results of interviews with the principal, teachers are given Agile Education training at the beginning of each school year with the aim of understanding the characteristics of Agile leaders and being able to

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build an Agile Education-based learning environment. Evaluation of the input component in the implementation of Agile Education at PKBM Flexi School includes aspects of human resources, facilities and infrastructure, supporting documents, and funding that support the smooth running of the Agile-based learning program. The results of the interview with Mrs. R, it was found that the input owned by PKBM Flexi School was sufficient and relevant to support the implementation of Agile Education.

All teachers at PKBM Flexi School have met the minimum academic qualification of a bachelor's degree and are specifically equipped with training on the Agile Education approach. The training is conducted through in-house training and character development linked to the values of Agile Education.

"Usually at the beginning we provide an explanation, training, then at the end we carry out internalization through a briefing,"

In addition, teachers are required to have competencies such as open-mindedness, adaptability, and a willingness to learn new approaches.

"The first clear competency is open-mindedness, a willingness to be open... if the teacher is open-minded, it is easier for us to add other competencies."

The Flexi School Community Learning Center (PKBM) has compiled important documents such as a syllabus, learning schedule (JP), and master curriculum.

"This master curriculum is also used as a reference, identifying what items students need to master… such as IRS in lectures," explained Mrs. R.

This document serves as a reference in developing contextual and flexible learning content. Furthermore, the infrastructure available supports digitalization and learning management.

"Yes, of course, there are computers…" explained Mrs. Ratih.

Although not tied to a single platform, communication facilities and digital access are available to support the implementation of Agile Education principles.

The source of funding for teaching and learning activities at PKBM Flexi School comes from the Education Development Contribution (SPP) obtained from students' parents every month. However, for now, some of the PKBM's operational costs are still supported by the Mandiri Edu Kreasi Foundation, which oversees PKBM Flexi School. Funding is prioritized for teacher honorariums, thus it is hoped that it will increase motivation and professionalism in teaching and guiding students. As for life skills activities and other activities outside of teaching and learning activities, funding sources can be obtained from participation funds from students' parents or sponsors, while for the purposes of socialization and Agile Education training are funded by the Foundation

Process

Agile Education at Flexi School is implemented through iterative learning cycles such as sprint planning, daily stand-ups, scrum releases, sprint reviews, and retrospectives. In this process, students are trained to determine their own learning goals (goal setting), organize activity stages through Flap (for example with Trello), present progress regularly (stand-ups), and reflect on obstacles and improvement strategies (retrospectives). This is in accordance with the statement conveyed by Mr. A,

"Students determine their own goals, we only accompany the process. Reflections are carried out regularly so that students are aware of how far they have learned."

This cycle strengthens students' self-regulation skills, perseverance, and resilience in facing learning challenges.

Each student is required to complete individual and group projects relevant to their interests and goals. These projects not only deepen academic understanding but also encourage students to conduct independent research, manage time, collaborate, and adapt to change. Mr. J said,

"Projects are not ordinary assignments; students must understand the 'why,' 'how,' and 'what.' This approach creates a connection between learning and real-life realities, so students are motivated and empowered to face learning challenges."

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This approach is implemented through project-based learning, life skills activities, academic learning, and internship and spiritual programs. Teachers act as facilitators and mentors, not dominant instructors. The learning process utilizes the Scrum framework to organize an iterative learning cycle through planning, implementation, and weekly reflections called retrospectives, typically held every Monday.

Product

Students not only experienced improvements in understanding and engagement during the learning process but also demonstrated high levels of academic resilience. This was evident in their resilience in facing learning challenges and their ability to remain motivated despite obstacles.

Students demonstrated improved academic achievement and learning engagement. They demonstrated impressive achievements, both in learning outcomes and critical thinking skills. This was reflected in their success in completing assignments, obtaining competency certificates, and even being accepted into prestigious universities.

> *"Well, then, suddenly, it turned out they already had the certificates, not the exam-style ones, and they were really enthusiastic about it," said Mr. J. "Some of the PKBM Flexi School high school graduates have successfully entered state universities through the test route, for example, ITB and UNPAD"*

The flexible learning approach has a significant impact on students' self-confidence and way of thinking. The flexibility of learning activities implemented at PKBM Flexi School makes students more confident, have good critical thinking, and have empathy for others.

In addition to academic achievement, students also experience progress in practical and social skills. They develop life skills such as time management, financial planning, and skills based on individual interests. "The skills are more life skills, such as time management, financial planning, or hard skills based on the projects they choose...through this process, they acquire new hard skills," explained Mr. A.

Collaborative skills and social empathy also develop, both in the context of academic assignments and social activities. Students are able to work in groups, become peer tutors, and demonstrate a caring attitude towards each other outside the classroom.

> *"So those who are able can teach those who are not yet able... like peer tutors. Flagship programs such as exhibitions also strengthen collaboration, with students taking full responsibility for the concept and implementation of the event. "So what they do is they create the concept for the event," explained Mr. A.*

Discussion

In the first component, related to **context**, the implementation of Agile Education at PKBM Flexi School is carried out by developing interventions that focus on student goals. In its implementation, Agile Education is carried out by striving to realize students' targets and achievements in developing their interests and talents. The applied curriculum covers the physical, intellectual, and spiritual aspects of students. This intervention is also developed to align with the development of interests and talents that students want to achieve when joining PKBM Flexi School. This aligns with the goal of the independent curriculum, which aims to create independent students (Azizah et al., 2023).

Agile Education supports the achievement of the Pancasila student profile with an approach that emphasizes spiritual development, intellectual intelligence, and emotional maturity. Students are given space to develop their talents and interests independently and in a focused manner. Indicators of this aspect include a curriculum that offers flexibility and focuses on essential materials to develop students' competencies as lifelong learners with Pancasila character.

The implementation of Agile Education prioritizes student independence and responsibility in the learning process, enabling them to become leaders for themselves and others. This approach supports the school's vision of producing future leaders who are not only academically intelligent but also spiritually sound (Aqil Baligh). Agile Education allows students to choose their own learning goals (Bogdanova & Parashkevova-Velikova, 2022). This

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aligns with the mission of providing learning based on student interests. Teachers provide guidance to make the learning process more relevant and aligned with potential (Hino & Funahashi, 2022).

The core values of the Flexi School Community Learning Center (PKBM), such as developing mature, independent, spiritual, and socially responsible students, also strongly support the Agile framework. Furthermore, the diverse backgrounds of students, including their experiences with adversity in formal education, reinforce the urgency of adaptive and empathetic methods like Agile. The presence of a collaborative culture, mutual respect, and egalitarian relationships between teachers and students also creates a safe and conducive learning environment for strengthening students' academic resilience (Iglesias et al., 2022).

Collaboration is also a strong pillar. Students learn not only from teachers but also from peers and parents through active engagement on educational portals. This reflects the mission to foster collaboration between all parties in education to develop adaptive students (Nadeem, 2024). The collaborative methods implemented in Agile Education support the development of students' problem-solving skills. By providing opportunities for students to address challenges independently and in groups, they are trained to become solution-oriented individuals who can overcome problems in everyday life (Ayar & Sabancioğullari, 2022). Discussions and collaboration among students within the context of Agile Education enhance their leadership skills. Students learn to lead in group situations and assist their peers, which are essential components of becoming a true leader.

The context evaluation results indicate that the implementation of the Agile Education Framework at PKBM Flexi School has a strong philosophical, regulatory, and institutional foundation. The Independent Curriculum, which allows for flexibility and adaptation to the context of educational units, serves as the legal basis supporting the use of the Agile approach. Furthermore, Flexi School's vision and mission emphasize the holistic development of student potential, encompassing spiritual, academic, and life skills. This aligns with the main principles of Agile: self-management, adaptation, collaboration, and continuous learning. The equivalency program at PKBM Al-Kahfi also demonstrated positive impacts in terms of knowledge and motivation. However, it has not yet adopted an adaptive learning approach like Agile. According to Al-Sholi et al., (2021), Agile Education is highly appropriate in responding to global challenges (COVID-19), but remains within a macro-level conceptual and policy framework. This research presents a concrete model for implementing Agile Education in non-formal education units (PKBM).

In the second component, related to **input**, Agile Education implementation planning begins with developing a flexible curriculum based on Agile principles, allowing students to learn independently and collaboratively according to their needs and interests. The curriculum development focuses on iterative learning, allowing students to reflect and improve themselves at each stage. Furthermore, in-depth research into the content of the learning materials is crucial to ensure that the topics taught are relevant, up-to-date, and adaptable to the dynamic needs of students (Zhou, 2025). This research includes a review of various sources, both theoretical and practical, as well as the latest trends in education that support the implementation of Agile methods. With a strong foundation in content, the curriculum will be more effective in creating a deep learning experience for students (Rekan et al., 2025). Therefore, all teachers at PKBM School are specifically provided with training on the Agile Education approach.

In general, the facilities and infrastructure at the Flexi School Community Learning Center (PKBM) are adequate to support the implementation of Agile Education-based learning. The school has various functional spaces, including classrooms, a teacher's lounge, a library, a multimedia room, a music studio, a gym, and a kitchen. These facilities support project-based learning, life skills development, and exploration of student interests (Chimwayange, 2025).

Specifically for project-based and technology-based learning, students utilize personal devices and digital tools such as Trello or Google Classroom for Flap (visualizing assignments and progress). Multimedia rooms and podcast studios are provided to support students in creative projects such as content creation, public speaking, and

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digital literacy (Carson, 2024). Despite limitations such as the lack of a science laboratory or separate counseling room, the school addresses these limitations with a collaborative and flexible approach. For example, sports activities are periodically held outside of school (such as at the GBK or public swimming pool), and computer practice is conducted on personal laptops in class.

The source of funding for teaching and learning activities at PKBM Flexi School comes from the Education Development Contribution (SPP) obtained from students' parents each month. However, for now, some of the PKBM's operational costs are still supported by the Mandiri Edu Kreasi Foundation, which oversees PKBM Flexi School. Funding is prioritized for teacher honorariums, thus it is hoped that this will increase motivation and professionalism in teaching and guiding students (Nurlizai & Amirulkamar, 2024). As for life skills activities and other activities outside of teaching and learning activities, funding sources can be obtained from participation funds from students' parents or sponsors, while for the purposes of socialization and Agile Education training are funded by the Foundation.

The input evaluation results indicate the readiness of human resources, facilities, and funding at PKBM Flexi School to support the implementation of Agile Education. Facilitators have participated in coaching training, Agile mindset, and implemented Scrum roles such as Product Owner, Scrum Master, and Development Team, which are carried out by students. According to Muntiarti et al., (2020), they also highlight the importance of quality input (human resources and curriculum) in the tahfidz program, but do not use an adaptive or technological approach. Similarly, Maghfirah & Suranto, (2023), they highlight the efficiency and flexibility of Agile methods in the startup world, but have not yet discussed their transfer to the world of education.

In the third component of the **process**, teachers are able to convey the form of student involvement in the Agile Education-based learning process. Teachers at the Flexi School PKBM demonstrate good skills in explaining student involvement in the learning process. They emphasize that each student has the opportunity to actively participate through various learning methods tailored to their individual interests and goals, which creates a dynamic and interactive learning atmosphere.

Teachers are able to adapt their learning designs when dealing with students with varying levels of academic resilience. Teachers proactively adjust their learning designs to meet the needs of students with varying levels of academic resilience (Afzali et al., 2024). They use collaborative approaches to support students who need more assistance and counseling strategies to identify challenges students face, allowing them to better understand their needs and adapt their teaching methods accordingly.

Learning through Agile Education promotes projects and continuous learning. Agile education fosters a lifelong learner mindset and encourages students to complete projects, making them more agile and adaptable as they enter post-school life. Facilitators must be able to recognize students' character and abilities and consistently monitor their progress to provide appropriate support to enhance their agility. Students have the opportunity to better understand themselves and learn multiple lessons simultaneously through projects, making teaching and learning more meaningful, in-depth, and enjoyable (Jääskä & Aaltonen, 2022).

Evaluation findings of the process components in the implementation of the Agile Education Framework at PKBM Flexi School indicate a dynamic, adaptive, and student-centered learning process. This process emphasizes flexibility, collaboration, continuous reflection, and high student agency as key strategies in developing academic resilience. The learning process at PKBM Flexi School takes place through the Scrum cycle: Sprint Planning, Stand-up, Sprint Review, and Retrospective. Students determine goals, develop strategies, implement projects, and reflect. Teachers act as facilitators and coaches, not dominant instructors. There is two-way communication between teachers, students, and parents. The effectiveness of eduScrum in real-life projects in higher education includes improved collaboration and decision-making (Rajagopalan et al., 2025). These findings are consistent, even though the context of your research is in PKBM at the junior high/high school level. A similar finding was also expressed

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by (Cojocaru et al., 2022) who proved the effectiveness of Agile in physical education by increasing flexibility and participant engagement.

In the fourth component, related to **product**, PKBM Flexi School uses an approach that emphasizes personalized learning, flexibility, and character development, proven to encourage students to achieve in various fields. The product component in this evaluation illustrates the tangible and comprehensive impact of the learning process on student quality, including academics, life skills, and character.

These findings demonstrate that the learning program at the Flexi School Community Learning Center (PKBM) has a comprehensive impact on student development, not only in academic aspects but also in developing resilient, collaborative character, and a growth mindset. The resilience demonstrated by students is a crucial foundation in building their readiness to face the challenges of life and the workplace in the future (D'Angelo, 2022).

Students have successfully entered state universities such as Bandung Institute of Technology (ITB) and Padjadjaran University (UNPAD), as well as several other national universities. Furthermore, they have won numerous gold and silver medals in national and international science olympiads. Many students have achieved success in the arts, sports, and graphic design competitions. Students have also excelled in internships and creative projects, such as music projects on Spotify.

The implementation of Agile Education at the Flexi School Community Learning Center (PKBM) has had a significant impact on the development of students' skills and habits. Students demonstrated improvements in various aspects, including self-confidence, goal setting, and problem-solving. With flexible, individual-oriented learning methods, students are better able to set their own goals and develop effective strategies to achieve them (Alon et al., 2025). They also gain greater confidence in making decisions and resolving challenges for both academic and non-academic purposes.

Furthermore, the implementation of Agile Education influences students' critical thinking and problem-solving skills. They become accustomed to analyzing existing problems and seeking solutions using different approaches. With learning methods that emphasize exploration and innovation, students are encouraged to move beyond a single approach to solving problems (Alon et al., 2025). This fosters a more flexible and adaptive mindset, enabling them to better face future challenges.

Another positive impact is seen in the relationship between students and teachers. With the Agile approach, students are more open to discussing and providing feedback to teachers about their learning experiences (Marnewick, 2023). Trust between students and teachers also increases, creating a more supportive and collaborative learning environment. This plays a crucial role in building students' academic resilience, making them less afraid of failure and more willing to try new things.

Evaluation of the product components shows that the implementation of Agile Education has a significant impact on the development of students' academic resilience. They not only demonstrate improved academic and non-academic achievement but also demonstrate a persistent, reflective, and responsible attitude towards their learning goals. Many students have been successfully accepted into prestigious universities, achieved academic awards, and demonstrated life skills such as time management, critical thinking, collaboration, and leadership. According to Yang and Wang, (2022), evidence that academic resilience is significantly correlated with academic achievement aligns with the findings of this study. Similarly, Dong, (2023) shows that client-based projects can strengthen students' future skills. Students execute real-life projects based on personal interests, not just academic demands.

The results of this study are relevant to (Tobondo et al., 2024) who stated that Agile plays a role in encouraging responsive teaching strategies, collaboration between stakeholders, and the integration of digital tools for personalized learning. This is in line with the opinion of (Andrian et al., 2025) who stated that all key features in the implementation of the Agile Model based on digital report cards, such as multi-user authentication, student data management, logbook management, and the import and export of grades, have functioned well without errors. This

is also in line with the statement of (Sanjaya et al., 2025) who stated that the development of a mobile-based online examination system with Agile-Scrum can increase the efficiency of the examination process, minimize the potential for cheating, and provide results quickly and accurately.

CONCLUSION

The results of the study indicate that the implementation of Agile Education is considered very good in terms of context because it is in line with the learning needs of the current era. In terms of input, human resources have met the qualifications despite facing constraints related to facilities and funding. In terms of process, teachers have been able to overcome challenges in the classroom through effective learning. From the product aspect, students showed significant improvements in academic resilience, academic achievement, and non-academic. Overall, the evaluation of the implementation of the Agile Education Framework made a positive contribution to the development of student academic resilience. Theoretically, the findings of this study strengthen the concept of Agile Education as an adaptive, flexible, and learner-centered learning approach, especially in the context of non-formal education. The results of this study also contribute to the development of academic resilience studies by demonstrating that learning environments are responsive to individual needs, collaborative, and based on continuous reflection.

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