

PENTA-HELIX MODEL OF MERDEKA KURIKULUM TO ADDRESS LEARNING LOSS AT SMA AL-ISLAM 1 SURAKARTA

Rochman Hadi Mustofa¹, Muhammad Tanzilal Ramadhan², Dewangga Satria Buana³, Mutiara Karima⁴, Bagus Shandy Narmanditya⁵

^{1,2,3,4} Department of Accounting Education, Faculty of Teacher Training and Education, Universitas Muhammadiyah Surakarta, ⁵Department of Economics Development Education, Faculty of Education, University of Kebangsaan Malaysia

[¹rhm342@ums.ac.id](mailto:rhm342@ums.ac.id)

Keyword	Abstract
<p><i>Learning Loss</i> <i>Merdeka Curriculum Implementation</i> <i>School Mover</i> <i>Penta-helix Model</i></p>	<p><i>The learning loss that emerged after online learning during the COVID-19 pandemic has resulted in low motivation and slow psychological development among students. This study aims to investigate the implementation of strategies to address learning loss through the implementation of the Merdeka Curriculum at SMA Al-Islam 1 Surakarta, a "Sekolah Penggerak" (Catalyst School) in Indonesia. This study employs a qualitative case study design, collecting data through interviews, documentation, and observation. The results reveal that the implementation of the Merdeka Curriculum to address learning loss involves character education through differentiated learning, optimization of the Project Penguatan Profil Pelajar Pancasila (P5) to strengthen students' national identity, and collaboration among the penta-helix (school principal, teachers, community, parents, and media). Effective communication by the school principal and their deputies with students' families was also critical in successfully implementing the Merdeka Curriculum. This study highlights the importance of collaboration among the penta-helix in implementing the Merdeka Curriculum at schools.</i></p>

INTRODUCTION

The COVID-19 pandemic, which began in early 2020, significantly impacted various sectors, including education. The shift from face-to-face to remote learning became necessary due to mobility restrictions, leading countries worldwide, including Indonesia, to adopt alternative learning methods and digital platforms. In Indonesia, the Ministry of Education and Culture and the Ministry of Research and Technology implemented policies for online school activities. This transition to distance learning brought about changes in habits, governance, and student behavior, with technology playing a crucial role in the learning process.

According to Hapsari et al. (2021), distance learning has changed habits and governance in learning activities. Proficiency in technology plays a significant role in the implementation of distance learning, as it is the only means to conduct learning activities. According to Solihat et al. (2022), learning during difficult times like the pandemic can change student behavior. They may feel liberated because their teachers do not monitor them directly. The negative impact is that the potential for academic cheating is greater and more difficult to anticipate.

As face-to-face learning resumed at the end of 2022, the prolonged period of online learning revealed its psychological effects on students, leading to decreased motivation and a phenomenon known as "learning loss." This situation prompted the development of the Merdeka Curriculum, aimed at addressing learning loss and fostering essential student knowledge through

a more comprehensive and engaging approach. Additionally, the "Sekolah Penggerak" or Catalyst School program was introduced to improve student character according to the Pancasila student profile, emphasizing the importance of character development in education.

Students who have experienced online learning generally feel accustomed and comfortable without realizing that they have missed many character-building aspects. They are surprised and already comfortable with online learning, which makes the 2013 curriculum feel the need to be revised with a new curriculum that focuses on character aspects. The development of character in learners needs to be designed in such a way that it involves communicative communication (Sutopo et al., 2021). The emergence of the prototype curriculum which later became the Merdeka curriculum (Pratikno et al., 2022) is expected to intervene in learning loss through several activities. According to Prianti (2022), the Merdeka curriculum is designed more comprehensively. In its implementation, the Merdeka curriculum emphasizes essential student knowledge and is carried out in a fun and unhurried manner. In addition, the Merdeka curriculum is designed as a means to overcome learning crises such as learning loss, as this curriculum change is one effort to overcome and prevent learning loss (Hasanuddin et al., 2022).

SMA Al-Islam 1 Surakarta is a Catalyst School in Indonesia that has been selected as one of the schools participating in the Program Sekolah Penggerak by the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia. As a Catalyst School, it has implemented various activities to address learning loss, which is a critical issue faced by its students. The school has also adopted a Merdeka Curriculum, which aims to promote independent and critical thinking among students. This context provides a relevant and important setting for conducting research on learning loss in SMA Al-Islam 1 Surakarta, with the potential to contribute to the development of effective strategies to overcome this challenge in Indonesian education.

METHOD

The method used in this research is a qualitative method with a case study approach, which describes the data obtained and then analyzed to obtain more detailed information about the implementation of the Merdeka Curriculum to address learning loss. The necessary data was obtained from observations, interviews, and documentation. Interviews were conducted with curriculum deputy principals, subject teachers, and grade X students. The initial stage of the Merdeka Curriculum implementation was only carried out in grade X, so grade XI and XII students were not included as informants.

Data validity was ensured by conducting triangulation, which involved gathering information from various data sources. Source triangulation was done by involving more than three informants in the interview process and comparing the results of the interviews. In addition, technique triangulation was also carried out by comparing observation data with interview and documentation data. The analysis used was interactive analysis by Miles, Huberman & Saldana (Miles et al., 2018).

RESULTS

1. Forms of Learning Loss in Al-Islam Surakarta High School Students

The first stage of the research was conducted by identifying the forms of learning loss that emerged in the school. The researcher held a limited Focus Group Discussion (FGD) involving 4 X-grade teachers who are members of the Learning Committee. The researcher began by asking the basic question

"What are the students like in school after distance learning?"

One of the informants, who is a Mathematics teacher, mentioned that the students are less active.

"The most noticeable thing is that students seem to be less enthusiastic about Mathematics," said the X-grade Mathematics teacher.

"I agree, even in the past, students used to be active and enthusiastic in English class, but now they tend to show less attention and respect for the teacher who delivers the material, let alone

the material itself. I have tried to use a different teaching approach, but the effect was not significant enough, I think," said the X-grade English teacher.

It appears that the form of learning loss mentioned by the Mathematics and English teachers is a low interest in learning in class. The informants compared students before the era of online learning with the COVID-19 generation, who have spent almost 2 years learning online. Even though teachers have tried to change their teaching approach, because students have become accustomed to online learning, the teaching approach is not considered effective enough.

The interview results were reinforced by the researcher's observations of classroom learning activities, which showed that students were less active during face-to-face learning in the classroom. The Curriculum Deputy Principal also stated that,

"the character of students nowadays is very different from students in previous eras. Especially the children (students) who are products of Corona (Covid-19) have been learning online for too long" - Curriculum Deputy Principal-

However, the phenomenon of learning loss due to the impact of the transition from online to face-to-face learning in the classroom is difficult to avoid. Despite the benefits gained, online learning also brings about negative behavioral changes in students (Purwanto et al., 2020).

The researcher also obtained a different perspective from a teacher who is also the Vice Principal for Student Affairs:

"I think that the new students (10th graders) who have experienced 2 years of distance learning since junior high school show a different attitude. Generally, when entering high school, the inherent traits from junior high school have started to diminish, such as respect for teachers, quickly getting close to new friends, and being more sociable to others. But now, they seem more indifferent and busy with their own affairs. This becomes our homework in the future so that with the new curriculum, we can focus on improving the character of the students." - Vice Principal for Student Affairs -

The forms of learning loss experienced by teachers on 10th-grade students at SMA Al-Islam 1 Surakarta are seen from two sides. From an academic perspective, the changes perceived are a decrease in learning interest in class, loss of student learning enthusiasm, and a lack of curiosity in students. Meanwhile, from the aspect of attitude, the perceived changes are the emergence of indifference among students.

The loss of enthusiasm and motivation to learn and the lack of activity are caused by the discomfort felt by students due to changes in the school environment (Jojo & Sihotang, 2022).

"Learning in the classroom feels boring. If I had to choose, I'd rather study at home. Usually, I eat breakfast while attending morning classes. Then, after finishing studying, I continue to play online games" - 10th grade student-

One of the 10th grade students at SMA Al-Islam 1 Surakarta said that learning in class feels boring because of a change in learning habits. Learning in school face-to-face feels boring to the student because they cannot do other routines like playing games after studying. As a digital native generation who spends most of their time online, it is reasonable that their happiness is closely related to digital activities. The school needs to redesign the form of learning that is preferred by students while still maintaining the essence of learning.

2. The Implementation of the Merdeka Curriculum in SMA Al-Islam 1 Surakarta

a) Differentiated Learning

The Merdeka Curriculum policy has recently become a topic of discussion in Indonesia as a government effort to give schools and teachers more freedom to develop curricula that cater to local needs and student characteristics. This curriculum allows schools to create more contextual and relevant learning models tailored to their students. At SMA Al-Islam Surakarta, a Sekolah Penggerak, there is a mandate to implement differentiated learning that focuses on student needs. The school principal noted that an In House Training (IHT) was conducted to design a learning approach that emphasizes students' learning requirements. Despite reaching a joint agreement, the Deputy Head of Curriculum observed that some teachers still imposed their personal teaching methods during implementation.

"The challenge is, we admit that there are some teachers who have not fully differentiated their teaching according to the needs of the students. So, some of them still rely on lectures from the teacher alone, some still use only summative assessment, while we see that many students in grade X are capable of making videos, projects, but because of the teacher's limited ability to assess, it is not differentiated. However, there are also teachers who have implemented it, and I often remind them that when there is an IHT forum, those creative teachers will be made as the resource persons." - Deputy Head of Curriculum.

From the information provided, the teacher's skill in carrying out flexible assessments can influence how creative they are in implementing differentiated learning. The school's strategy can make teachers who are able to differentiate themselves as role models for other teachers. This can provide support for teachers to carry out differentiated learning. The implementation of the Merdeka Curriculum at Al Islam Surakarta High School requires adequate support from various parties, including infrastructure and teacher training. Regular evaluation and monitoring are also necessary to ensure its effectiveness in addressing learning loss. A crucial but often overlooked aspect of differentiated learning is conducting diagnostic assessments, which help teachers identify learning needs, assess student achievement, and evaluate the success of their teaching efforts.

"Often overlooked is the need to conduct diagnostic assessments as was requested during technical guidance by the facilitator... The obstacle is actually a perception issue that assumes diagnostic assessments must take the form of questionnaires. In fact, diagnostic assessments can be carried out through observation." Principal of Al Islam Surakarta High School

One of the obstacles faced is the perception issue that diagnostic assessments must take the form of questionnaires. However, diagnostic assessments can be done through observation. Through observation, teachers can observe students' behavior in various learning situations, so they can identify students' needs and abilities more accurately (Ahmed et al., 2019). Therefore, it is important for teachers to change their perceptions about diagnostic assessments.

b) Implementating "Project Penguatan Profil Pelajar Pancasila (P5)" or The Project to Strengthen the Pancasila Student Profile

The Project to Strengthen the Pancasila Student Profile (P5) at SMA Al Islam Surakarta involves selecting project themes separate from the regular curriculum. In the first year, the theme "Build the Soul and Body," adapted from a Ministry of Education and Culture module, focuses on reinforcing Islamic character, ethics, and responsibility. The second theme, Entrepreneurship, includes input from alumni who are entrepreneurs to inspire an entrepreneurial spirit in students. The principal and vice principal play a key role in facilitating communication among alumni, students, and parents.

"Communication with parents, especially, is a challenge for us because this project is relatively new, and parents are likely not yet familiar with it. We must ensure that there is no misunderstanding between parents and the school because the essence of this project is to instill noble values in our students. Some parents ask why their children are required to create a product and sell it online. In such cases, we need to provide an explanation to the parents." - Principal of SMA Al Islam Surakarta -

In this context, the principal and vice principal need to communicate openly and clearly with parents about the purpose and benefits of project-based learning. They also need to explain the values they aim to achieve through project-based learning and the methods used to evaluate student progress.

One of the challenges faced by the school principal in addition to communicating with parents regarding the P5 project is aligning the understanding of the roles and responsibilities of teachers who supervise the P5 project.

"The problem from the teacher's side is that some of them think that the P5 project is assessed based on the final artifact/product. Actually, what is expected is the internalization of values such as critical thinking, independence, teamwork, and noble character. But in practice, some teachers do not assess these aspects even though they have been conveyed during IHT." - Principal of SMA Al Islam Surakarta.

"There was a moment during the girls' art exhibition where they used makeup, and during the midday prayer time (Dhuhur), they did not want to pray until the event was over because they were afraid their makeup would come off. This means that the values of the Pancasila student profile have not yet been fully internalized." - P5 Project Coordinator.

The challenges faced by the school principal and the P5 project coordinator at SMA Al Islam Surakarta are related to the difficulty of aligning the understanding of the roles and responsibilities of teachers who supervise the P5 project. One of the obstacles faced is that some teachers may still focus on the final product rather than the more important internalization of values such as critical thinking, independence, teamwork, and noble character.

c) Media Based Learning Community on the Merdeka Mengajar Platform

The optimization of the Merdeka Mengajar platform (PMM) in Catalyst Schools is an inherent mandate. Although many schools have not fully optimized the use of PMM, PMM is an inseparable part of the implementation of the Merdeka Curriculum in Catalyst Schools (Kemendikbudristek, 2022).

The use of PMM is entirely the responsibility of teachers and school principals and can involve students in terms of documentation and editing of content for uploading to PMM. The optimization of PMM at Al Islam Surakarta High School was explained by the school operator and the Vice Principal for the Curriculum as follows.

"The biggest challenge is actually when asking teachers to log in and complete real actions, but before that, the initial difficulty that arises is email activation. Technical constraints like this should be understood." School Operator

"Teachers who have fast PMM progress are generally those who have video editing skills and digital exploration, while senior teachers need to be motivated and accompanied." Vice Principal for Curriculum.

As stated, teachers feel that PMM requires patience and most of them need to be accompanied to progress optimally. PMM is a platform designed as a medium for teachers to learn together and share their own best practices. Meanwhile, the introduction of PMM itself is still running in parallel with the Catalyst School status, so it takes time for schools to fully optimize PMM.

3. Collaboration of Penta-Helix in Overcoming Learning Loss

In the context of addressing learning loss, the penta-helix model can be used to improve collaboration among the five stakeholders in improving the quality of learning.

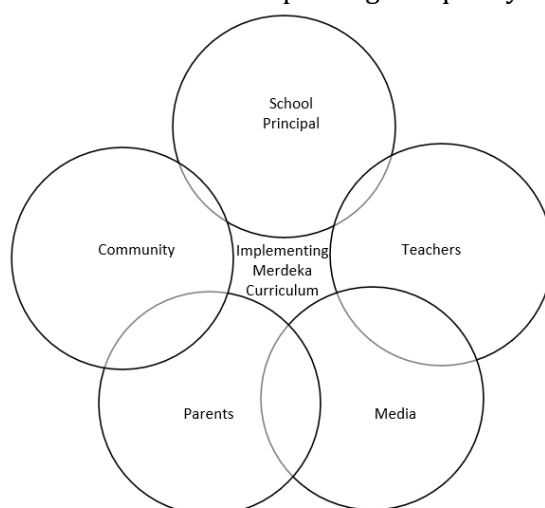


Figure 1. Penta-helix Model for Merdeka Curriculum to Overcome Learning Loss

- a. School Principal: as the school leader, the principal can help identify students experiencing learning loss and develop strategies to improve the quality of learning. The principal can also

- collaborate with teachers and parents to develop remedial programs or learning quality improvement programs.
- b. Teacher: as a learning facilitator, the teacher can identify students' learning difficulties and develop more effective learning strategies. Teachers can also collaborate with principals and parents in developing remedial programs or learning quality improvement programs.
 - c. Parents: as student supporters at home, parents can help improve students' learning motivation and provide the necessary support to improve the quality of learning. Parents can also collaborate with teachers and principals in developing remedial programs or learning quality improvement programs.
 - d. Community: as a representation of society, the community can play a role in supporting the improvement of learning quality. The community can help provide access to learning support resources, such as books, libraries, or learning spaces.
 - e. Media: PMM is a specially prepared platform to be a media in the helix model. The media can play a role in disseminating information related to learning quality improvement programs and provide support in raising public awareness of the importance of improving the quality of learning.

By working together in the penta-helix model, stakeholders can complement and support each other in addressing learning loss. However, in some contexts, the government can be an important stakeholder in addressing learning loss through policies and financial support. Therefore, depending on the specific context and situation, the government can still be included as one of the stakeholders in the penta-helix model.

DISCUSSION

a) Forms of Learning Loss in Al-Islam Surakarta High School Students

This study reveals the significant impact of remote learning during the COVID-19 pandemic on 10th-grade students at SMA Al-Islam 1 Surakarta. Through a focused group discussion with teachers from the Learning Committee, it was found that students showed a noticeable decline in interest and enthusiasm for learning after returning to in-person classes. Both Mathematics and English teachers observed that students were less active and less engaged compared to the period before the pandemic. Despite attempts to implement new teaching approaches, these efforts have not been sufficiently effective in reigniting students' motivation to learn.

In addition to the decline in academic interest, there were also significant behavioral changes among students, particularly those who experienced two years of remote learning during junior high school. Teachers and the Vice Principal for Student Affairs noted that students have become more indifferent, less respectful towards teachers, and less sociable. The researcher's classroom observations further supported these findings, showing that students were less active in face-to-face learning. These shifts in attitude and behavior highlight the negative impact of remote learning on students' character development, underscoring the need to redesign learning methods that cater to the digital generation while preserving the core values of education.

The situation of boredom in learning is a challenge faced by many schools in facing the COVID-19 pandemic. However, boredom in learning can also occur in face-to-face learning situations. This can affect student motivation and impact the quality of learning. To overcome boredom in learning, schools can consider several strategies, such as adopting varied and attention-grabbing learning methods (Szymkowiak et al., 2021), adjusting learning patterns to students' needs (Kuhfeld & Tarasawa, 2020), encouraging active student participation, creating a fun and conducive learning environment, and providing rewards for students who successfully achieve learning goals or actively and discipline in learning (Tri Yuningsih & Sunaryo, 2022). However, these strategies must also pay attention to the essence of learning and achieve the set learning goals. Several studies have shown that the use of technology and learning media can improve the quality of learning and reduce boredom in students (Sutama & Fajriani, 2022)(Nedungadi et al., 2023). Therefore, schools can consider utilizing technology in learning and adapting to students' learning needs to improve the quality of learning and overcome boredom in students.

b) The Implementation of the Merdeka Curriculum in SMA Al-Islam 1 Surakarta

The implementation of the Merdeka Curriculum at SMA Al-Islam 1 Surakarta highlights several key initiatives and challenges in adapting to this new educational framework. One of the central aspects is differentiated learning, which aims to tailor education to individual students' needs. While some teachers have embraced this approach, others struggle to move away from traditional methods, indicating a need for further training and support. The school has taken steps, such as In House Training (IHT), to address these issues, but ongoing efforts are required to ensure all teachers effectively implement differentiated learning strategies.

One of the suggested strategies is to provide training to teachers to improve their ability in carrying out flexible assessments (Roberts & Inman, 2023). This training can include the use of various types of assessments, such as formative and summative assessments, as well as assessments that incorporate technology such as video and project-based assessments (van Geel et al., 2019). However, the constraint in implementing differentiated learning is the lack of time and resources available in schools. Therefore, the suggested strategy is to use existing resources effectively, such as the use of technology and collaboration among teachers to design differentiated learning (Pozas et al., 2020). Teachers need to realize that diagnostic assessments do not have to take the form of questionnaires, and that observation is also an effective assessment method to identify students' needs and abilities. In addition, teachers also need to be trained in conducting diagnostic assessments, so they can identify students' needs and abilities more accurately and effectively.

Another significant element of the Merdeka Curriculum is the Project to Strengthen the Pancasila Student Profile (P5), which involves project-based learning focused on instilling values like critical thinking and teamwork. Despite the innovative nature of P5, the school faces challenges in aligning teachers' understanding of the project's goals, with some still focusing more on the final product rather than the internalization of values. Effective communication between the school leadership, teachers, and parents is crucial to overcoming these challenges and ensuring the success of P5.

Effective communication between the principal, vice principal, and parents can build trust and good collaboration between the school and parents. This can help increase student motivation to learn and facilitate the achievement of expected learning goals. The role of leadership in the "New Normal Leadership" of the principal is essential, given that the principal must be agile, vigilant, and have initiative (Francisco & Nuqui, 2020).

Challenges in aligning the understanding of tasks and responsibilities of teachers who accompany the P5 project are commonly encountered in many schools. Based on research conducted Sulistiyo dan Dewantara (2021) on project-based learning programs in Indonesia, it shows that there are several obstacles faced in the implementation of this program, such as lack of support from the school and teachers, as well as lack of knowledge and skills in designing and managing the program.

Collaboration with the community and external institutions can also help improve students' understanding of the values that are to be instilled through the P5 project. Based on research conducted by Hidayati et al., (2020) on collaboration between teachers and local indigenous communities to instill positive values of local wisdom.

In the context of the Pancasila student profile values, school principals and P5 project coordinators can take inspiration from character education programs implemented in several schools in Indonesia. According to research conducted by Subaidi (2020), effective character education programs are those that are able to integrate character values in all aspects of learning, prevent bullying (Noboru et al., 2021), and maintain environmental stability (Fikri & Savitri, 2022).

The school also utilizes the Merdeka Mengajar platform (PMM) to foster a media-based learning community. While PMM has the potential to enhance teacher collaboration and professional development, its implementation has encountered technical difficulties, particularly among senior teachers who may lack digital literacy. The school recognizes the need for ongoing

technical support and motivation to fully optimize PMM and is committed to integrating it into the broader framework of the Merdeka Curriculum.

Overall, the successful implementation of the Merdeka Curriculum at SMA Al-Islam 1 Surakarta requires a concerted effort from all stakeholders, including continuous training for teachers, effective communication with parents, and leveraging technology like PMM to support innovative teaching practices. With time and collaboration, these efforts aim to overcome the challenges of adapting to the new curriculum and improve the quality of education for students.

The challenges and experiences faced by the operators, teachers, and school management in optimizing PMM implementation in SMA Al Islam Surakarta align with findings in previous studies (Sari et al., 2021) (Rotty et al., 2022). The technical difficulties encountered in the early stages of PMM activation and the need for teacher support and motivation, particularly among senior teachers, are consistent with the experiences reported in other schools in Indonesia. Despite the challenges, the school is committed to PMM implementation as a means to improve the quality of teaching and learning, and to promote collaboration and knowledge-sharing among teachers. However, the school needs time to fully optimize the use of PMM, which requires patience, diligence, and technical skills, especially in editing and uploading content.

Overall, the findings suggest that PMM has the potential to support teacher professional development and to enhance collaboration and knowledge-sharing among teachers in Sekolah Penggerak. The results highlight the importance of providing ongoing technical support and motivation to teachers, especially to those who are less digitally literate and experienced. Additionally, the study suggests that Sekolah Penggerak can benefit from collaborating with external experts and the local community to enrich the learning experience of students and to align the understanding of the project's goals and values. Ultimately, the successful implementation of PMM requires the commitment and collaboration of all stakeholders involved in Sekolah Penggerak.

c) Collaboration of Penta-Helix in Overcoming Learning Loss

In addressing learning loss, the penta-helix model offers a collaborative framework involving five key stakeholders to enhance the quality of education. The school principal plays a crucial role by identifying students affected by learning loss and developing strategies in partnership with teachers and parents to implement remedial or quality improvement programs. Teachers, as learning facilitators, are essential in recognizing students' learning difficulties and crafting more effective teaching methods while collaborating with principals and parents to create targeted interventions. Parents, providing support at home, are vital in boosting students' motivation and contributing to the development of programs that address learning gaps. The community, representing society, can support learning quality by providing access to resources such as books, libraries, or learning spaces. The media, particularly through the PMM platform, can disseminate information on educational improvement initiatives and raise public awareness about the importance of enhancing learning quality. By working together within the penta-helix model, these stakeholders can effectively complement and support each other's efforts in tackling learning loss. Additionally, the government can be an integral stakeholder in this model, providing policies and financial support to address learning loss, depending on the specific context and situation.

CONCLUSION

In a previous discussion, we discussed two issues in education, namely the challenges faced by school principals in aligning teacher understanding regarding the P5 project, and how the pentahelix model can be used to address learning loss through collaboration among five main stakeholders, namely school principals, teachers, parents, government/communities, and media.

The principal of Al Islam Surakarta High School faces challenges in aligning the understanding of the tasks and responsibilities of teachers who accompany the P5 project. Teachers do not fully understand that P5 assessment is more about internalizing values such as critical thinking, independence, collaboration skills, and noble character, rather than just the final

product. Therefore, the principal needs to collaborate with teachers and develop strategies to improve their understanding in order to achieve the intended goals.

To address learning loss, the pentahelix model can be used to enhance collaboration among the five main stakeholders in education, namely school principals, teachers, parents, government/communities, and media. Each stakeholder has a different role and responsibility in addressing this issue. In the pentahelix model, the principal can help identify students who experience learning loss and develop strategies to improve the quality of learning, teachers can develop more effective learning strategies, parents can provide support in improving the quality of learning, communities can provide access to learning support resources, and media can disseminate information related to programs to improve the quality of learning. Thus, through collaboration among these five stakeholders, learning loss can be addressed more effectively.

REFERENCES

- Afrina, M., Siska, J., Agusta, O. L., Sasongko, R. N., & Kristiawan, M. (2022). The policy of mover school as a catalyst for improving the quality of education. *JPPi (Jurnal Penelitian Pendidikan Indonesia)*, 8(1), 108. <https://doi.org/10.29210/020221639>
- Ahmed, F., Ali, S., & Shah, R. A. (2019). Exploring variation in summative assessment: Language teachers' knowledge of students' formative assessment and its effect on their summative assessment. *Bulletin of Education and Research*, 41(2), 109–119. <https://eric.ed.gov/?id=EJ1229441>
- Dayagbil, F. T., Palompon, D. R., Garcia, L. L., & Olvido, M. M. J. (2021). Teaching and Learning Continuity Amid and Beyond the Pandemic. *Frontiers in Education*, 6(July), 1–12. <https://doi.org/10.3389/educ.2021.678692>
- Donnelly, R., & Patrinos, H. A. (2021). Learning loss during Covid-19: An early systematic review. *Prospects*, 51(4), 601–609. <https://doi.org/10.1007/s11125-021-09582-6>
- Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences of the United States of America*, 118(17). <https://doi.org/10.1073/PNAS.2022376118>
- Fikri, M. A., & Savitri, Y. A. (2022). Pancasila, Environmental Protection, and Religious Movements: How Can Pancasila Education in Islamic Boarding Schools Promote Environmental Sustainability? *Jurnal Panjar: Pengabdian Bidang Pembelajaran*, 4(1), 31–54. <https://doi.org/10.15294/panjar.v4i1.55018>
- Francisco, C., & Nuqui, A. V. (2020). Emergence of a Situational Leadership during COVID-19 Pandemic called New Normal Leadership. *International Journal of Academic Multidisciplinary Research*, 4(10), 15–19. www.ijeais.org/ijamr
- Hapsari, F., Desnaranti, L., & Wahyuni, S. (2021). Peran Guru dalam Memotivasi Belajar Siswa selama Kegiatan Pembelajaran Jarak Jauh. *Research and Development Journal of Education*, 7(1), 193. <https://doi.org/10.30998/rdje.v7i1.9254>
- Hasanuddin, Chairunnisa, Novianti Winda, Edi Syamsi, Suharti Atiyah, Chayati Nur, Putu I, Saparrudin, Purwanto Edi, Pangestu Lila, Febriana Asti, E. P. (2022). Perencanaan Pembelajaran (Kurikulum Merdeka Belajar) (D. Nur, Farida Nurul (ed.)).
- Hidayati, N. A., Waluyo, H. J., Winarni, R., & Suyitno. (2020). Exploring the implementation of local wisdom-based character education among Indonesian higher education students. *International Journal of Instruction*, 13(2), 179–198. <https://doi.org/10.29333/iji.2020.13213a>
- Irawati, D., Iqbal, A. M., Hasanah, A., & Arifin, B. S. (2022). Profil Pelajar Pancasila Sebagai Upaya Mewujudkan Karakter Bangsa. *Edumas pul: Jurnal Pendidikan*, 6(1), 1224–1238. <https://doi.org/10.33487/edumas pul.v6i1.3622>
- Jojo, A., & Sihotang, H. (2022). Analisis Kurikulum Merdeka dalam Mengatasi Learning Loss di Masa Pandemi Covid-19 (Analisis Studi Kasus Kebijakan Pendidikan). *Edukatif: Jurnal Ilmu Pendidikan*, 4(4), 5150–5161. <https://doi.org/10.31004/edukatif.v4i4.3106>
- Kemendikbud Ristek. (2021a). Keputusan Menteri Pendidikan, Kebudayaan, Riset, Dan Teknologi Republik Indonesia Nomor 162/M/2021. *Pesquisa Veterinaria Brasileira*, 26(2), 173–180.
- Kemendikbud Ristek. (2021b). Surat Edaran Penyelenggaraan Pembelajaran Tatap Muka Tahun Akademik 2021/2022. <https://Kemdikbud.Go.Id>, 3–5.
- Kemendikbudristek. (2022). Apa Itu Platform Merdeka Mengajar? <https://pusatinformasi.guru.kemdikbud.go.id/hc/en-us/articles/6090880411673-Apa-Itu-Platform-Merdeka-Mengajar->

- Kemendikbudristek BSKAP. (2022). Salinan Keputusan Kepala Badan Standar, Kurikulum, dan Asesmen Pendidikan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Nomor 009/H/KR/2022 Tentang Dimensi, Elemen, dan Sebelemen Profil Pelajar Pancasila Pada Kurikulum Merdeka. In Kemendikbudristek BSKAP RI (Issue 021, pp. 1–35).
- Kuhfeld, M., & Tarasawa, B. (2020). The COVID-19 slide: What summer learning loss can tell us about the potential impact of school closures on student academic achievement. *NWEA Research*, April, 1–7. https://www.nwea.org/content/uploads/2020/05/Collaborative-Brief_Covid19-Slide-APR20.pdf
- Maipita, I., Dalimunthe, M. B., & Sagala, G. H. (2021). The Development Structure of the Merdeka Belajar Curriculum in the Industrial Revolution Era. *Proceedings of the International Conference on Strategic Issues of Economics, Business and, Education (ICoSIEBE 2020)*, 163(ICoSIEBE 2020), 145–151. <https://doi.org/10.2991/aebmr.k.210220.026>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2018). *Qualitative Data Analysis* (S. Publishing (ed.); 4th ed.).
- Nedungadi, P., Devenport, K., Sutcliffe, R., & Raman, R. (2023). Towards a digital learning ecology to address the grand challenge in adult literacy. *Interactive Learning Environments*, 31(1), 383–396. <https://doi.org/10.1080/10494820.2020.1789668>
- Noboru, T., Amalia, E., Hernandez, P. M. R., Nurbaiti, L., Affarah, W. S., Nonaka, D., Takeuchi, R., Kadriyan, H., & Kobayashi, J. (2021). School-based education to prevent bullying in high schools in Indonesia. *Pediatrics International*, 63(4), 459–468. <https://doi.org/10.1111/ped.14475>
- Pozas, M., Letzel, V., & Schneider, C. (2020). Teachers and differentiated instruction: exploring differentiation practices to address student diversity. *Journal of Research in Special Educational Needs*, 20(3), 217–230. <https://doi.org/10.1111/1471-3802.12481>
- Pratikno, Y., Hermawan, E., & Arifin, A. L. (2022). Human Resource 'Kurikulum Merdeka' from Design to Implementation in the School: What Worked and What not in Indonesian Education. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 7(1), 326–343.
- Prianti, D. (2022). Analisis Kurikulum Merdeka dan Platform Merdeka Belajar untuk Mewujudkan Pendidikan yang Berkualitas. *Jurnal Penjaminan Mutu*, 8, 238–244.
- Purwanto, A., Pramono, R., Asbari, M., Santoso, P. B., Wijayanti, L. M., Choi, C. H., & Putri, R. S. (2020). Studi Eksploratif Dampak Pandemi COVID-19 Terhadap Proses Pembelajaran Online di Sekolah Dasar. *EduPsyCouns: Journal of Education, Psychology and Counseling*, 2(1), 1–12.
- Ratna, Puspita, Astungkoro, R. (2022). Nadiem: Kurikulum Merdeka Bisa Tekan Learning Loss Hingga 50 Persen. *Republika*.
- Roberts, J. L., & Inman, T. F. (2023). *Strategies for Differentiating Instruction: Best Practices for the Classroom*. Taylor & Francis.
- Rotty, V. N., Kainde, Q., Pitoy, J. I., Grace, L., Punduh, L., & Mamonto, J. V. (2022). "Sekolah Penggerak" and Centers of Excellence. *International Journal of Information Technology and Education*, 1(4), 111–138. <https://ijite.jredu.id/index.php/ijite/article/view/89>
- Sari, R. A., Musthafa, B., & Yusuf, F. N. (2021). Persepsi Guru terhadap Pembelajaran Berbasis Proyek di Sekolah Menengah Kejuruan. *Jurnal Penelitian Pendidikan*, 21(2), 1–11. <https://doi.org/10.17509/jpp.v21i2.36972>
- Satiti, A. D. R., & Falikhatun, F. (2022). Accounting Curriculum Evaluation in Implementation Merdeka Belajar - Kampus Merdeka. *Assets: Jurnal Akuntansi Dan Pendidikan*, 11(1), 21. <https://doi.org/10.25273/jap.v11i1.9880>
- Solihat, A. N., Sadih, A., & Gumilar, G. (2022). Jurnal Inovasi Pendidikan Ekonomi Pengaruh Pembelajaran Daring terhadap Learning Loss dan Implikasinya. *Jurnal Inovasi Pendidikan Ekonomi*, 12(1), 12–22.
- Subaidi. (2020). Strengthening character education in Indonesia: Implementing values from moderate Islam and the Pancasila. *Journal of Social Studies Education Research*, 11(2), 120–132.
- Sutama, S., & Fajriani, I. N. (2022). Media Pembelajaran E-Learning Berbasis WEB di Tingkat Sekolah Menengah Kejuruan. *Jurnal VARIDIKA*, 33(2), 129–140. <https://doi.org/10.23917/varidika.v33i2.15330>
- Sutopo, A., Ariyatmi, S. Z., Tumiyem, T., Sofiana, I., Prayitno, H. J., Wijayanto, K., & Nisa, C. (2021). Penguatan Sektor Ekonomi dan Pendidikan Karakter Siswa pada Era Pandemi. *Buletin KKN Pendidikan*, 3(2), 175–183. <https://doi.org/10.23917/bkkndik.v3i2.15656>
- Szymkowiak, A., Melović, B., Dabić, M., Jeganathan, K., & Kundi, G. S. (2021). Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. *Technology in Society*, 65, 101565. <https://doi.org/https://doi.org/10.1016/j.techsoc.2021.101565>

- Tri Yuningsih, T., & Sunaryo, I. (2022). Implementation of Reward and Punishment in Forming Discipline Character Early Childhood. *Early Childhood Research Journal (ECRJ)*, 4(2), 27-38. <https://doi.org/10.23917/ecrj.v4i2.12164>
- van Geel, M., Keuning, T., Frèrejean, J., Dolmans, D., van Merriënboer, J., & Visscher, A. J. (2019). Capturing the complexity of differentiated instruction. *School Effectiveness and School Improvement*, 30(1), 51-67. <https://doi.org/10.1080/09243453.2018.1539013>
- Widyastuti, A. (2022). *Menjadi Sekolah dan Guru Penggerak* (R. Anggria Putri (ed.)). PT Elex Media Komputindo.
- Yaw, H., Issah, S., & Azupogo, F. (2022). Heliyon Online learning experiences among nursing and midwifery students during the Covid-19 outbreak in Ghana: A cross-sectional study. 8(June). <https://doi.org/10.1016/j.heliyon.2022.e12155>
- Yoo, D., & Kweon, I. S. (2019). Loss_for_Active_Learning_CVPR_2019. *Cvpr*, 93-102.