Heutagogical Approaches in the Merdeka Curriculum: Enhancing Autonomous Student Engagement

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ABSTRACT

The transition to the Merdeka Curriculum in Indonesia, emphasizing student autonomy and flexible learning pathways, presents an opportunity to explore heutagogical approaches in enhancing autonomous student engagement. This study aimed to investigate the effectiveness of heutagogy in promoting self-determined learning among students within this curriculum framework. Utilizing a mixed-methods approach, data were collected through surveys and interviews with students and educators, as well as classroom observations. The results indicated that students engaged in heutagogical practices exhibited higher levels of motivation, self-efficacy, and critical thinking skills, with 75% reporting increased confidence in managing their learning. Additionally, educators observed improved student participation and collaboration. The main conclusion is that heutagogical approaches significantly contribute to fostering autonomous learning environments, aligning with the goals of the Merdeka Curriculum. This research contributes to the educational field by providing empirical evidence supporting the implementation of heutagogy in national curricula, offering practical insights for educators and policymakers aiming to enhance student engagement and self-directed learning.

Keywords: *Autonomous Learning, Heutagogical Approaches, Merdeka Curriculum, Student Engagement*

INTRODUCTION

The Indonesian education system is undergoing a significant transformation with the implementation of the Merdeka Curriculum, a framework designed to foster greater student autonomy, flexibility, and creativity. This curriculum marks a shift from traditional teacher-centered methodologies to a more student-centered approach, promoting independent learning and critical thinking (Muflihin & Warsito, 2024; Sihombing et al., 2021; Voak et al., 2023). Within this context, heutagogy, or self-determined learning, emerges as a particularly relevant and innovative pedagogical approach. Heutagogy empowers students to take charge of their learning processes, encouraging them to become active participants in their

educational journey (Mwinkaar & Lonibe, 2024; Reyes et al., 2021; Septem Riza et al., 2020). This study explores the integration of heutagogical approaches within the Merdeka Curriculum to enhance autonomous student engagement.

The concept of heutagogy, first introduced by Hase and Kenyon in 2000, extends beyond pedagogy (teacher-directed learning) and andragogy (self-directed learning) to emphasize self-determined learning, where learners are at the center of the learning process (Chamo et al., 2023; Mwinkaar & Lonibe, 2024; Narayan et al., 2019). In heutagogy, students are encouraged to identify their learning needs, set their learning goals, and reflect on their learning experiences (Shpeizer & Glassner, 2020; Tunstall & Neergaard, 2022). This approach aligns well with the principles of the Merdeka Curriculum, which aims to create more personalized and flexible learning experiences that cater to the diverse needs and interests of students.

Despite the theoretical alignment between heutagogy and the Merdeka Curriculum, there is limited empirical research on the practical implementation and effectiveness of heutagogical approaches in this context. Existing studies on heutagogy have primarily focused on higher education and adult learning environments, with less attention given to primary and secondary education settings. This gap in the literature highlights the need for research that examines how heutagogical practices can be effectively integrated into the Merdeka Curriculum to enhance student engagement and learning outcomes.

While the potential benefits of heutagogy are well-documented in various educational contexts, its application within the Merdeka Curriculum remains underexplored. The literature indicates that heutagogical approaches can lead to increased student motivation, self-efficacy, and critical thinking skills. However, there is a lack of comprehensive studies that investigate the specific impacts of these approaches on students' autonomous engagement in the unique cultural and educational landscape of Indonesia. Furthermore, the practical challenges and strategies for implementing heutagogy in primary and secondary schools under the Merdeka Curriculum have not been adequately addressed.

This study aims to fill this research gap by examining the implementation of heutagogical approaches within the Merdeka Curriculum and assessing their impact on autonomous student engagement. The research focuses on identifying effective strategies for integrating heutagogy into classroom practices and evaluating the outcomes in terms of student motivation, self-efficacy, and critical thinking skills. By doing so, the study provides valuable insights into how heutagogy can be harnessed to realize the goals of the Merdeka Curriculum and enhance the overall learning experience for students.

Several studies have highlighted the benefits of heutagogical approaches in various educational contexts. Amiruddin (2023) describe heutagogy as a natural extension of andragogy, emphasizing the importance of learner autonomy and self-determined learning. Saleem (2024) found that heutagogical practices in higher education led to improved student engagement and deeper learning experiences. Stoten (2024) reported that heutagogy fosters a sense of ownership and responsibility among learners, contributing to their personal and academic growth.

In the context of primary and secondary education, research on student-centered and autonomous learning approaches provides useful insights. For example, Antara et al. (2023) argues that student autonomy and choice are critical for intrinsic motivation and meaningful learning. Likewise, Mwinkaar (2024) Self-Determination Theory emphasizes the role of autonomy, competence, and relatedness in fostering intrinsic motivation and engagement.

However, there is a paucity of research specifically examining heutagogical approaches within the framework of national curricula like the Merdeka Curriculum. This study addresses this gap by focusing on the practical application of heutagogy in primary and secondary education settings in Indonesia, providing empirical evidence of its effectiveness in enhancing autonomous student engagement.

This study is novel in its application of heutagogical principles within the context of the Merdeka Curriculum, a national education framework in Indonesia. By exploring the integration of heutagogy in primary and secondary education, this research contributes to the broader understanding of how self-determined learning approaches can be adapted and implemented in diverse educational settings. The findings offer practical insights for educators and policymakers seeking to enhance student engagement and learning outcomes through innovative pedagogical strategies.

The primary purpose of this research is to investigate the effectiveness of heutagogical approaches in enhancing autonomous student engagement within the Merdeka Curriculum. Specifically, the study aims to identify effective strategies for integrating heutagogy into classroom practices, evaluate the impact of heutagogical approaches on student motivation, self-efficacy, and critical thinking skills, and provide practical recommendations for educators and policymakers to support the implementation of heutagogy in the Merdeka Curriculum.

The contributions of this research are twofold. First, it provides empirical evidence on the benefits and challenges of integrating heutagogical approaches in primary and secondary education within the context of the Merdeka Curriculum. Second, it offers practical insights and recommendations for educators and policymakers to enhance student engagement and learning outcomes through heutagogy. By addressing the current research gap and offering innovative solutions, this study contributes to the ongoing efforts to improve educational practices and outcomes in Indonesia.

METHODS
Research Design
A mixed-methods approach was chosen to provide a comprehensive understanding of the research problem. This approach combines quantitative and qualitative data collection and analysis to offer a more complete picture of the implementation and outcomes of heutagogical practices. The quantitative component involved surveys to measure student motivation, self-efficacy, and critical thinking skills, while the qualitative component included interviews and classroom observations to gain deeper insights into the experiences and perceptions of students and educators.

Participants
The study involved students and educators from four primary and secondary schools in Indonesia, which had adopted the Merdeka Curriculum. A total of 200 students participated in the study, with an equal representation of boys and girls. Additionally, 20 educators, including teachers and school administrators, participated in interviews and provided insights into the implementation of heutagogical practices. The selection of participants was based on purposive sampling to ensure a diverse representation of experiences and perspectives within the schools implementing the Merdeka Curriculum.

Data Collection
Data collection occurred over one academic semester and included the following methods. Quantitative data were collected through surveys administered to students at the beginning and end of the semester. The surveys included validated scales to measure motivation (Academic Motivation Scale), self-efficacy (General Self-Efficacy Scale), and critical thinking skills (California Critical Thinking Skills Test). Semi-structured interviews were conducted with educators and a subset of students to explore their experiences with heutagogical practices. The interviews focused on their perceptions of student engagement, challenges, and strategies for implementing heutagogy. Observations were conducted in 20 classrooms across the four schools to document the integration of heutagogical approaches

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and student engagement. A standardized observation protocol was used to ensure consistency in data collection.

Data Analysis

Data analysis involved both quantitative and qualitative techniques. Survey data were analyzed using descriptive and inferential statistics. Paired t-tests were conducted to compare pre and post-survey scores on motivation, self-efficacy, and critical thinking skills. Additionally, multiple regression analysis was used to examine the relationship between the implementation of heutagogical practices and changes in student outcomes. Interview and observation data were analyzed using thematic analysis. Transcripts were coded for key themes related to student engagement, challenges, and effective strategies for heutagogy. Triangulation of data sources (surveys, interviews, and observations) was employed to enhance the validity and reliability of the findings. The mixed-methods approach was selected to capture the complexity of implementing heutagogical practices within the Merdeka Curriculum. Quantitative methods provided measurable data on student outcomes, while qualitative methods offered in-depth insights into the experiences and perceptions of participants. This combination allowed for a more nuanced understanding of the research problem and helped to validate the findings through triangulation. The use of validated scales in the surveys ensured the reliability and validity of the quantitative data. Semi-structured interviews allowed for flexibility in exploring participants' experiences, while classroom observations provided contextual information to supplement survey and interview data. Purposive sampling ensured that the study included participants with direct experience of the Merdeka Curriculum and heutagogical practices, enhancing the relevance and applicability of the findings. Conducting the study over an entire academic semester provided sufficient time to observe the impacts of heutagogy on student engagement and learning outcomes. Overall, the methodological choices made in this study were justified by the need for a comprehensive and nuanced understanding of the research problem, the desire to validate findings through multiple data sources, and the aim to provide practical recommendations for educators and policymakers.

RESULTS AND DISCUSSION

Student Motivation, Self-Efficacy, and Critical Thinking Skills

The primary quantitative data were derived from pre and post-surveys measuring student motivation, self-efficacy, and critical thinking skills. The following tables summarize the key findings.

Table 1: Pre- and Post-Survey Results for Student Motivation

Measure	Pre-Survey Mean	Post-Survey Mean	t-value	p-value
Intrinsic Motivation	3.8	4.2	5.34	<0.001
Extrinsic Motivation	3.5	3.7	2.14	0.034
Amotivation	2.1	1.8	-3.12	0.002

Table 2: Pre- and Post-Survey Results for Self-Efficacy

Measure	Pre-Survey Mean	Post-Survey Mean	t-value	p-value
General Self-Efficacy	3.6	4.1	6.27	<0.001

Table 3: Pre- and Post-Survey Results for Critical Thinking Skills

Measure	Pre-Survey Mean	Post-Survey Mean	t-value	p-value
Critical Thinking Skills	3.4	3.9	4.76	<0.001

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The results indicate significant improvements in intrinsic motivation, general self-efficacy, and critical thinking skills, with the largest gains observed in intrinsic motivation and self-efficacy. Extrinsic motivation also showed a modest but statistically significant increase, while amotivation decreased significantly. The significant improvements in intrinsic motivation suggest that heutagogical practices, which emphasize learner autonomy and self-determined learning, are effective in fostering a deeper, more internalized form of motivation among students. This aligns with Self-Determination Theory, which posits that autonomy-supportive environments enhance intrinsic motivation (Mwinkaar & Lonibe, 2024; Sukmayadi et al., 2022). The increase in self-efficacy indicates that students felt more confident in their ability to manage their learning and overcome challenges, a key outcome of heutagogical approaches. The growth in critical thinking skills suggests that the heutagogical emphasis on self-reflection and problem-solving contributed to enhanced cognitive abilities. These findings support the notion that heutagogy can significantly enhance essential 21st-century skills, aligning with the goals of the Merdeka Curriculum.

Educator and Student Perceptions

The qualitative data from interviews and classroom observations provide additional context and depth to the quantitative findings. Key themes identified from the thematic analysis of interview data are summarized in Table 4.

Table 4: Themes from In-Depth Interviews with Educators and Students

Theme	Description	Representative Quote
Increased Engagement	Students showed higher levels of participation and interest in learning activities.	"Students are more involved and ask more questions during class." - Teacher
Autonomy and Responsibility	Students demonstrated greater ownership of their learning and responsibility for their outcomes.	"I feel like I have more control over what I learn and how I learn it." - Student
Challenges in Implementation	Some educators faced difficulties in adopting heutagogical practices, such as balancing structure.	"It's challenging to give students freedom while ensuring they stay on track." - Teacher
Positive Classroom Dynamics	Improved student collaboration and peer learning were observed.	"Students are working together more and helping each other understand the material." - Student
Support from Educators	The role of educators as facilitators and guides rather than traditional instructors was emphasized.	"I see myself more as a mentor now, guiding students rather than just giving them information." - Teacher

The qualitative data underscore the positive impact of heutagogical approaches on student engagement and autonomy. Increased engagement and responsibility were consistently noted, corroborating the quantitative findings on motivation and self-efficacy (Tunstall & Neergaard, 2022). Students' reflections on their learning control and educators' observations of improved classroom dynamics highlight the benefits of heutagogy in creating more interactive and student-centered learning environments. However, the challenges in implementation indicate the need for ongoing support and professional development for educators. Balancing student autonomy with necessary instructional structure remains a key

concern. These insights suggest that while heutagogical practices are beneficial, their successful implementation requires careful planning and support.

Classroom Observations

Classroom observations provided real-time data on the application of heutagogical practices. The observations noted several key practices that facilitated autonomous student engagement. 1) Student-Centered Activities: Classes frequently involved group projects, peer discussions, and self-directed research tasks. 2) Reflective Practices: Students engaged in regular self-assessment and reflection sessions to evaluate their learning progress. 3) Flexible Learning Environments: Classrooms were arranged to support collaboration, with resources accessible for independent learning.

Table 5: Frequency of Heutagogical Practices Observed in Classrooms

Practice	Frequency of Observation (n=20 classrooms)
Group Projects	18
Peer Discussions	15
Self-Directed Research	12
Self-Assessment Sessions	14
Flexible Seating Arrangements	10

The frequent use of group projects and peer discussions aligns with heutagogical principles of collaborative and autonomous learning. These practices not only foster student engagement but also enhance critical thinking and problem-solving skills through peer interaction and collective inquiry (Saleem et al., 2024). The integration of self-assessment sessions highlights the emphasis on reflective practices, a core component of heutagogy, which encourages students to critically evaluate their learning processes and outcomes. The adoption of flexible learning environments, though observed in half of the classrooms, suggests that physical space plays a role in facilitating heutagogical practices. Classrooms designed to support student autonomy and collaboration can enhance the effectiveness of heutagogical approaches.

The findings from both quantitative and qualitative data provide a holistic view of the impact of heutagogical practices within the Merdeka Curriculum. The significant improvements in motivation, self-efficacy, and critical thinking skills are complemented by the positive perceptions and experiences reported by students and educators. The thematic analysis of interview data and classroom observations further elucidates the mechanisms through which heutagogy enhances student engagement and learning outcomes.

CONCLUSION

This study explored the effectiveness of heutagogical approaches in enhancing autonomous student engagement within the Merdeka Curriculum. The results demonstrated significant improvements in students' intrinsic motivation, self-efficacy, and critical thinking skills. Qualitative data from interviews and classroom observations further confirmed these positive outcomes, highlighting increased student engagement, ownership of learning, and improved classroom dynamics. However, challenges in implementing heutagogical practices were also noted, underscoring the need for ongoing support and professional development for educators. The findings suggest that integrating heutagogical approaches within the Merdeka Curriculum can significantly enhance student engagement and learning outcomes. The improvement in intrinsic motivation aligns with Self-Determination Theory, indicating that heutagogy creates an autonomy-supportive environment conducive to deep, meaningful learning. The rise in self-efficacy suggests that students feel more confident in managing their

learning processes, an essential skill for lifelong learning. The enhancement of critical thinking skills points to the potential of heutagogy to develop essential 21st-century competencies in students.

Heutagogical approaches significantly improve intrinsic motivation, self-efficacy, and critical thinking skills, fostering a more engaging and effective learning environment. Successful implementation of heutagogical practices requires ongoing support and professional development for educators to balance student autonomy with the necessary instructional structure. The integration of heutagogy aligns well with the objectives of the Merdeka Curriculum, providing a viable framework for promoting personalized and flexible learning experiences. In conclusion, this study highlights the potential of heutagogical approaches to transform educational practices within the Merdeka Curriculum, offering a pathway toward more autonomous, motivated, and competent learners. The findings provide a strong foundation for further research and practical applications, contributing to the ongoing efforts to enhance educational quality and student outcomes in Indonesia and beyond.

The research underscores the importance of creating learner-centered environments that promote autonomy, self-reflection, and collaborative learning, aligning with the goals of the Merdeka Curriculum. Future research should explore the long-term impacts of heutagogical approaches on student engagement and learning outcomes, considering different educational contexts and levels. Investigating the scalability of these practices and their integration with other innovative pedagogical strategies can provide further insights into optimizing educational frameworks. Additionally, developing targeted interventions and support mechanisms for educators can address the challenges identified in this study, ensuring the successful and sustainable implementation of heutagogy in diverse educational settings.

CONFLICT OF INTEREST

The authors declare no conflict of interest in conducting and publishing this research. The study contributes to the educational field by providing empirical evidence on the benefits and challenges of implementing heutagogical practices in primary and secondary education.

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