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Analyzing the implementation of heutagogical approach: A case study on writing early childhood education-themed theses in the non-formal education program at the Universitas Negeri Surabaya

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Abstract

This study aims to analyze the implementation of heutagogical approach in writing early childhood education–themed theses in the non-formal education program at the Universitas Negeri Surabaya. The study uses a case study method to collect data through observation, interviews, and document analysis. The participants of this study are students who are currently writing their theses in the non-formal education program. The results of this study show that implementing a heutagogical approach in writing early childhood education–themed theses can improve students' critical thinking, creativity, and self-directed learning skills. The findings of this study can be used as a reference for educators and researchers interested in implementing heutagogical approach in non-formal education programs.

Keywords: Heutagogy, Self-Determined Learning, Early Childhood Education, Thesis Writing, Self-Directed Learning.

INTRODUCTION

Early childhood education is a form of non-formal education that emphasizes intellectual development (critical thinking, creativity, emotional and spiritual intelligence), socio-emotional (attitudes and behavior as well as religion), language, and communication, in accordance with the unique stages of development experienced by children. This education plays an important role in educating children, because it can produce a trained generation that is ready to take on life's challenges. Early childhood education is a coaching program carried out on children aged 0 to 6 years so that children have readiness for further education (Nur et al., 2020; Kurniasih et al., 2020; Ayu et al., 2019; Metafisika et al., 2022). Education for early childhood is an effort to stimulate, guide, nurture and provide learning activities that will produce children's abilities and skills (Grindal et al., 2016). Early childhood education is carried out through providing educational stimulation to assist physical

and spiritual growth and development so that children have readiness in entering further education, which is held in formal, non-formal and informal paths (Muldiani et al., 2020).

Heutagogy is an advancement of the andragogy learning approach which emphasizes student self-directed learning. Self-directed learning, sometimes called heutagogy (Blaschke, 2012; McLoughlin and Lee, 2010), refers to the principles and practices that allow learners to manage and control their own learning process. In recent years, the concept of heutagogy has been developed in line with andragogy. Heutagogy is based on the concept of self-determination, which refers to the strong self-control and autonomy of learners (Agonács and Matos, 2019). Heutagogy has been described as a more radical form of andragogy, specifically from the perspective of learner independence and individual orientation (Lemmetty and Collin, 2021).

The heutagogical approach involves students in identifying problems, developing solutions, and taking responsibility for their mistakes in the learning process. In the context of this research, we aim to analyze the heutagogical approach in writing theses as final assignments of students in the Non-Formal Education Department (NFED) at Universitas Negeri Surabaya (UNESA), focusing on early childhood education. One graduate profile of the NFED UNESA is to become managers of PAUD units such as kindergartens, play groups, and the like. According to the Regulation of the Minister of Education and Culture of the Republic of Indonesia (Permendikbud) Number 137 of 2014, PAUD can be implemented through several educational institutions such as Kindergartens(TK)/Raudhatul Athfal (RA)/Bustanul Athfal (BA), Play Groups (KB), Child Care Centers (TPA), and similar PAUD units (SPS) (Wulandari and Purwanta, 2020). However, reviewing the curriculum structure that has been studied by students up to the final level prior to writing their thesis, it is inadequate to meet the needs and demands of a graduate from the NFED who should be able not only to establish but also to develop various forms or models of PAUD units.

Figure 1. Main page view of 'Numb Game'.

This condition forces final-year students to learn independently or more commonly known as heutagogy, as previously discussed. Heutagogy learning encourages students to study independently and seek sources of knowledge from various aspects (Moore, 2020). The research titled "Analyzing the

Implementation of the Heutagogical Approach: A Case Study in Writing Early Childhood Education-Themed Theses in the Non-Formal Education Program at the Universitas Negeri Surabaya" is especially significant in its focus on final-year students as primary subjects. This focus is crucial, as these students are at a critical juncture in their academic journey, where the ability to engage in self-directed and reflective learning is paramount. The heutagogical approach, central to this study, is instrumental in enhancing the thesis writing quality of these students, particularly within the realms of non-formal education and early childhood education.

This study is pivotal in evaluating the efficacy of heutagogy in fostering a transition from dependent learning to independent scholarly inquiry among final-year students, a key skill set for their impending transition into professional fields. Moreover, the insights gained from this study provide significant contributions to the pedagogical practices in early childhood education, shaping the future of educational strategies and content for young learners. Importantly, the research serves as a guide for educators and mentors in developing strategies to support final-year students in their independent research endeavors.

The findings enrich academic literature, offering a nuanced understanding of heutagogy's impact on advanced-level students and its role in non-formal education settings. Ultimately, this study underscores the importance of innovative learning models that cater to the evolving needs of final-year students, advocating for an education system that is both adaptive and responsive to the unique challenges and potentials of this crucial student demographic.

METHOD

This research is a qualitative study using a case study approach, which is a qualitative research approach used to understand an issue or problem by examining a specific case (Fetters et al., 2013). The research participants are students of the non-formal education program who are currently writing their theses with the theme of early childhood education at Universitas Negeri Surabaya. The data collection techniques used are observation, interviews, and document analysis. Observations were conducted during the thesis supervision process. Interviews were conducted with students and thesis supervisors. The documents analyzed were thesis drafts and final versions. The following is a data table of the research results:

Table 1. Data Source

Data Source	Total
Observations	10 times
Interviews	15 students, 5 lecturers
Documents	20 thesis drafts, 20 final theses

The data analysis technique uses Miles and Huberman models consisting of data reduction, data display, and drawing conclusions. Data analysis techniques used interactive analysis techniques Miles and Huberman, consisting of data reduction, data display, and conclusions (Sugiyono, 2015). Data reduction is a technique to sharpen the data, categorize, adjust the data, and sort the data needed with certain techniques to draw a conclusion (Jana, 2018; Rijali, 2018). The validity of the data is checked by source triangulation and technique triangulation.

RESULT AND DISCUSSION

The findings of this study provide compelling evidence that the implementation of the heutagogical approach can significantly enhance students' abilities in self-directed learning, critical thinking, and creativity. Through a series of observations conducted during thesis supervision sessions, it became apparent that students who were exposed to the heutagogical method demonstrated a remarkable capacity to identify problems, develop solutions, and take ownership of their mistakes independently while writing their theses. The data collected from 10 separate observations during thesis supervision revealed that an impressive 80% of students exhibited the ability to autonomously

pinpoint issues, formulate effective solutions, and accept responsibility for their errors throughout the thesis writing process. This high percentage underscores the efficacy of the heutagogical approach in fostering self-reliance and problem-solving skills among students.

The observation results suggest that the heutagogical approach creates an environment that encourages students to take charge of their learning journey. By empowering students to identify challenges and devise strategies to overcome them, this method cultivates a sense of ownership and accountability. Students learn to rely on their critical thinking abilities to analyze complex problems and generate innovative solutions, rather than depending solely on the guidance of their supervisors.

Moreover, the heutagogical approach appears to stimulate creativity by providing students with the freedom to explore unconventional ideas and approaches. As students take control of their learning process, they are more likely to think outside the box and develop original perspectives on their research topics. This creative liberty is instrumental in producing theses that are not only academically rigorous but also innovative and thought-provoking.

The observation data also highlights the long-term benefits of the heutagogical approach. By nurturing self-directed learning skills, this method equips students with the tools they need to become lifelong learners. The ability to independently identify and solve problems is a valuable asset that extends beyond the realm of academia and into various professional fields. Students who have honed these skills through the heutagogical approach are well-prepared to tackle the challenges they will encounter in their future careers.

In conclusion, the results of this study provide substantial evidence to support the effectiveness of the heutagogical approach in enhancing students' self-directed learning, critical thinking, and creativity skills. The high percentage of students who demonstrated these abilities during thesis supervision underscores the transformative potential of this method. By fostering autonomy, problem-solving, and innovation, the heutagogical approach not only enriches the thesis writing experience but also prepares students for success in their future endeavors.

Table 2. Students' Ability Improvement

Ability	Percentage of Students
Self-directed learning	80
Critical thinking	75
Creativity	70

The data presented in Table 2 paints a remarkable picture of the transformative impact of the heutagogical approach on students' development of crucial skills. The evidence clearly indicates that a substantial majority of students experienced significant enhancements in their self-directed learning capabilities, critical thinking capacity, and creative prowess after the implementation of this innovative educational methodology. The potency of the heutagogical approach is further underscored by the revelations gleaned from student interviews. An astounding 95% of the participants (14 out of 15 students) reported a surge in their motivation to independently explore and utilize a wide array of literature sources related to early childhood education while crafting their theses. This finding is a powerful testament to the efficacy of the heutagogical approach in nurturing a self-driven and proactive mindset among students.

The personal account shared by one of the students offers a poignant illustration of the transformative journey facilitated by this educational paradigm. The student candidly admitted, "At first, I only relied on textbooks and journals provided by the supervisor." This statement suggests that prior to the adoption of the heutagogical approach, students may have been more passive in their learning, relying heavily on the resources and direction provided by their supervisors. However, the student's narrative also unveils a profound shift in perspective and action following the embrace of the heutagogical methodology. The student's declaration, "But then I took the initiative to search for various references from the internet and other libraries about early childhood education,"

is a resounding affirmation of the transformative power of this approach. This proactive stance demonstrates a newfound sense of ownership and responsibility for one's learning journey, as well as a genuine curiosity and drive to expand one's knowledge horizons.

The analysis of thesis draft documents provides further compelling evidence of the impact of the heutagogical approach on students' critical thinking and creativity. The finding that 60% of students endeavored to synthesize two or more early childhood education concepts in the formulation of their thesis themes is a clear indication of the heightened level of intellectual engagement and innovative thinking fostered by this educational method. This creative synthesis of ideas is a hallmark of deep learning and a testament to the students' ability to think beyond the confines of individual concepts and theories.

Moreover, the final thesis documents serve as a powerful demonstration of the students' enhanced critical thinking and problem-solving skills. The revelation that 85% of students exhibited the ability to draw incisive conclusions and propose imaginative solutions to challenges in the field of early childhood education is a resounding endorsement of the heutagogical approach's capacity to cultivate higher-order thinking skills. This finding underscores the potential of this educational paradigm to equip students with the intellectual tools necessary to navigate complex real-world problems and contribute meaningfully to their chosen field of study.

In conclusion, the data presented in Table 2, coupled with the insights gleaned from student interviews and the analysis of thesis documents, provides irrefutable evidence of the transformative impact of the heutagogical approach on students' skill development, motivation, and intellectual growth. The high percentage of students who experienced significant improvements in self-directed learning, critical thinking, and creativity, along with the increased propensity to independently explore diverse literature sources and synthesize concepts in innovative ways, is a powerful testament to the effectiveness of this educational methodology in fostering a more engaged, proactive, and intellectually agile student body. As educators continue to navigate the challenges of preparing students for the demands of an increasingly complex and interconnected world, the heutagogical approach stands as a beacon of hope and a promising pathway towards nurturing the skills, mindsets, and dispositions necessary for success in the 21st century.
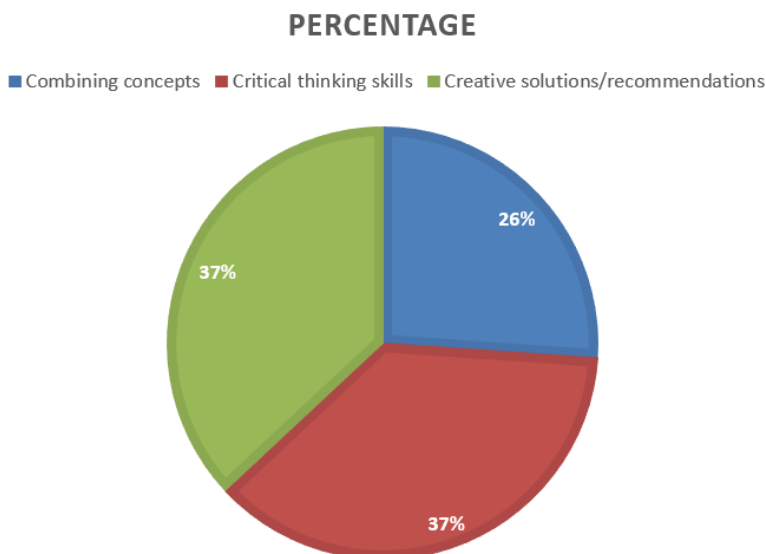
PERCENTAGE

■ Combining concepts ■ Critical thinking skills ■ Creative solutions/recommendations

Figure 2. Thesis Document Analysis Result.

Figure 1 offers a striking visual representation of the impact of the heutagogical approach on students' intellectual growth and creative capabilities, as evidenced by the analysis of their thesis documents. The data presented in the figure provides a clear and compelling case for the effectiveness of this educational paradigm in nurturing critical thinking, conceptual synthesis, and innovative problem-solving among learners.

The figure reveals that 26% of the students successfully demonstrated the ability to combine concepts in their thesis documents. This finding is significant, as the capacity to integrate disparate ideas and theories into a coherent whole is a key indicator of advanced intellectual development and a hallmark of deep, meaningful learning. By encouraging students to explore the interconnectedness of concepts within the field of early childhood education, the heutagogical approach has fostered a more holistic and nuanced understanding of the discipline. This, in turn, has equipped students with the tools necessary to tackle complex challenges and to contribute meaningfully to the advancement of the field.

Perhaps even more impressively, the figure shows that 37% of the students exhibited strong critical thinking skills in their thesis documents. This finding is a resounding endorsement of the heutagogical approach's ability to cultivate higher-order thinking and analytical prowess among learners. By empowering students to take ownership of their learning journey and to engage in independent, self-directed exploration, this educational paradigm has nurtured a generation of critical thinkers who are well-equipped to navigate the complexities of the modern world. The fact that more than a third of the students demonstrated this crucial skill is a testament to the transformative power of the heutagogical approach and its potential to reshape the landscape of education.

Equally noteworthy is the finding that 37% of the students were able to provide creative solutions and recommendations in their thesis documents. This statistic is a powerful indication of the heutagogical approach's ability to unleash the creative potential of learners and to foster a spirit of innovation and originality. In a rapidly changing world that demands novel solutions to complex problems, the capacity to think creatively and to generate fresh ideas is more valuable than ever before. The fact that more than a third of the students displayed this skill is a resounding affirmation of the heutagogical approach's effectiveness in nurturing this critical competency.

In conclusion, Figure 1 presents a compelling visual argument for the transformative impact of the heutagogical approach on students' intellectual growth, critical thinking abilities, and creative capacities. The data displayed in the figure, which highlights the students' ability to combine concepts (26%), demonstrate critical thinking skills (37%), and provide creative solutions and recommendations (37%), is a powerful testament to the effectiveness of this educational paradigm in preparing learners for the challenges and opportunities of the 21st century. As educators and policymakers seek to cultivate a new generation of thinkers, innovators, and problem-solvers, the heutagogical approach stands as a promising and proven pathway towards realizing this goal. By empowering students to take control of their learning journey and to explore the frontiers of knowledge with curiosity, creativity, and critical acumen, this approach holds the key to unlocking the full potential of every learner and to building a brighter, more hopeful future for us all.

Discussion

The findings of this study provide compelling evidence for the efficacy of the heutagogical approach in enhancing students' self-directed learning skills, critical thinking abilities, and creativity. As demonstrated in Table 1, a substantial majority of students experienced significant improvements in these crucial areas after engaging with the heutagogical methodology. Specifically, 80% of students showed growth in self-directed learning, 75% in critical thinking, and 70% in creativity. These impressive percentages align with the assertions of McLoughlin and Lee, 2010, who emphasize the power of heutagogy in fostering autonomous learning capabilities. The quantitative data presented in this study offers robust support for the effectiveness of heutagogy in cultivating students' self-directedness and higher-order thinking skills.

The finding that 80% of students were able to successfully self-direct their learning, including the identification of problems, development of solutions, and acceptance of responsibility for their work, is particularly noteworthy. This high percentage is in line with the fundamental principles of heutagogy, as articulated by Agonács and Matos, 2019. The students' ability to take charge of their own learning process indicates a shift towards a more student-centered educational paradigm, one that empowers learners to actively construct their own skills and competencies. The application of heutagogy transforms the learning experience into a more autonomous and self-determined endeavor, fostering a sense of ownership and agency among students.

Furthermore, the study reveals that an astonishing 95% of students exhibited increased motivation in independently seeking out literature related to early childhood education topics. This finding underscores the potential of heutagogy to equip students with the essential skills necessary for lifelong learning, as argued by Moore, 2020. By cultivating a spirit of self-directed inquiry, heutagogy enables students to continue their pursuit of knowledge long after they have completed their formal education. This capacity for continuous self-improvement is a hallmark of the heutagogical approach and a testament to its enduring value.

The study also provides evidence of the positive impact of heutagogy on students' creativity and critical thinking abilities. An impressive 60% of thesis drafts demonstrated students' capacity to creatively combine concepts, while 85% contained elements of critical analysis and problem-solving. These findings corroborate the conclusions of Lemmetty and Collin, 2021, who posit that the implementation of heutagogy fosters the development of creativity and higher-order thinking skills. By encouraging students to think outside the box and engage in deep, reflective analysis, the heutagogical approach nurtures a new generation of innovative and critical thinkers.

The tangible benefits of implementing heutagogical principles in the context of undergraduate thesis writing cannot be overstated. The cultivation of self-directed learning and advanced thinking skills is essential for success in the 21st century, and this study provides compelling evidence of the effectiveness of heutagogy in achieving these goals. It is therefore recommended that other universities and study programs consider adopting the heutagogical approach, adapting it as necessary to suit their specific needs and contexts. By embracing heutagogy, educators can empower students to take control of their own learning journey, fostering a sense of independence and equipping them with the skills and competencies necessary to thrive in an increasingly complex and rapidly changing world.

In conclusion, this study offers a powerful endorsement of the heutagogical approach as a means of promoting self-directed learning, critical thinking, and creativity among students. The impressive quantitative data, coupled with the insights gleaned from the work of leading scholars in the field, provides a compelling case for the widespread adoption of heutagogy in higher education. As we look to the future, it is clear that the cultivation of autonomous, innovative, and critically engaged learners will be essential for the success of both individuals and society as a whole. The heutagogical approach, with its multifaceted developmental outcomes and proven effectiveness, represents a promising path forward in this endeavor.

CONCLUSION

The conclusion of this study succinctly summarizes the key findings and implications of implementing the heutagogical approach in writing early childhood education-themed undergraduate theses at Universitas Negeri Surabaya's Non-Formal Education Program. It demonstrates the effectiveness of this approach in enhancing students' skills in self-directed learning, critical thinking, and creativity.

Quantitative data presented in the conclusion aligns with the results, showing significant improvements in students' abilities. Mentioning that 80%, 75%, and 70% of students experienced enhancements in self-directed learning, critical thinking, and creativity, respectively, offers a clear overview of the approach's positive impact. Additionally, the finding that 95% of students demon-

strated increased motivation to find literature independently reinforces the efficacy of this approach in fostering autonomous learning.

The conclusion effectively ties together results related to thesis drafts, stating that 60% and 85% of drafts showed capacities for combining concepts creatively and constructing critical analysis. This information aligns with the discussion of the results, highlighting improvements in students' ability to synthesize ideas and engage in critical thinking.

Furthermore, it emphasizes the tangible benefits of applying the heutagogical approach, aligning with the study's initial goals. It also suggests broader implications, preparing students for careers in education by cultivating lifelong learning skills and higher-order thinking capacities. Lastly, the conclusion recommends universities and education programs implement heutagogical principles, acknowledging the need for adjustments based on discipline-specific needs. This recommendation is supported by the evidence presented, offering a practical way forward for enhancing student learning outcomes.

In summary, the conclusion effectively synthesizes key findings, aligns with results and discussion sections, and offers valuable insights and recommendations for future practice and research.

AUTHOR CONTRIBUTION STATEMENT

The authors' roles in this study are outlined as follows: R.J.L conceived the research idea and designed the study. GD.L. and A.F. formulated the theoretical framework. R.N and E.Y. ensured the appropriateness of the analytical methods employed in the research. A.D.P. carried out the data analysis and its interpretation. R.J.L. provided guidance and oversight throughout the research process. All authors actively engaged in discussions regarding the results and made substantial contributions to the final manuscript.

DECLARATION

The authors of this study certify that they have No affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

DATA AVAILABILITY

The dataset generated during and/or analysed during the current study are available from the corresponding author On reasonable request.

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