E-Clue *Journal of English, Culture, Language, Literature,and Education* published by English Education Department Faculty of Languages and Arts, Universitas Negeri Manado, Vol. 13 No. 1, pp. 1-17

Graduate Students Perceptions Toward the Integration of Heutagogy Approach in Material Development Class

Devilito Prasetyo Tatipang[1a], Muh. Al Fachrizah Fitra[1b], Sharil Nur[2*]

[1a]*English Education, Postgraduate Program, Universitas Negeri Makassar, Makassar, Indonesia*
Email: devilitoprasetyotatipang@gmail.com

[1b]*English Education, Postgraduate Program, Universitas Negeri Makassar, Makassar, Indonesia*
Email: muhalfachrizahfitra@gmail.com

[2*]*English Education, Postgraduate Program, Universitas Negeri Makassar, Makassar, Indonesia*
Email: sahrilfbsunm@unm.ac.id

ARTICLE HISTORY

Receive: 12 October 2024
Accepted: 02 February 2025
Published: 13 February 2025

KEYWORDS

Heutagogy Approach
EFL Students
Material Development
Learner Autonomy
Perception

ABSTRACT

This study investigates graduate students' perspectives on integrating the heutagogical approach in a Material Development course, emphasizing its effects on engagement, critical thinking, skill acquisition, and real-world applicability. Heutagogy, or self-determined learning, prioritizes learner autonomy, critical reflection, and the flexibility to tailor learning strategies to individual needs. The research employs a descriptive qualitative design, utilizing Likert-scale questionnaires and interviews to collect data from 15 doctoral students, with five selected for in-depth discussions. Findings indicate that most participants consider heutagogy highly effective in promoting self-directed learning and creativity in material development. Notably, 73% strongly believe this approach will benefit their academic and professional futures, demonstrating its relevance to evolving trends in educational material creation. Additionally, 67% feel confident in their ability to innovate and adapt, while 53% recognize its role in developing transferable skills for interdisciplinary projects. Furthermore, 80% affirm that heutagogy is well-suited for doctoral-level education, reinforcing its value in advanced academic settings. Despite these positive outcomes, challenges remain, particularly regarding students' confidence in mentoring others through heutagogical methods. This underscores the need for further investigation into peer-learning and mentorship strategies within this framework. Overall, the study highlights heutagogy's effectiveness in fostering critical thinking and adaptability in higher education.

Corresponding Author:

Sahril Nur
Universitas Negeri Makassar
Email: sahrilfbsunm@unm.ac.id

INTRODUCTION

The rapid advancements in education, driven by technology and an increasingly globalized society, have ushered in a paradigm shift in how knowledge is acquired and constructed. Traditional teacher-centered approaches are being reconsidered in favor of learner-centered paradigms that foster autonomy, creativity, and lifelong learning (Lengkoan et al., 2024). Moore, (2020) pointed out that among these emerging approaches, heutagogy, or self-determined learning, stands out as a pedagogical strategy that empowers learners to take control of their educational journeys. Rooted in constructivist theory, heutagogy emphasizes agency, critical thinking, and adaptability, attributes that are increasingly critical in the 21st century (Exter & Ashby, 2022). However, its integration into specific contexts, such as Material Development classes for graduate students, has yet to be fully explored. Higher education today is marked by diverse learner profiles and complex demands that challenge conventional pedagogies (Lengkoan & Rombepajung, 2022). Scholars argue that traditional instructional methods, while effective for foundational knowledge transfer, often fail to equip students with the metacognitive skills and adaptability required in dynamic professional environments Liando & Tatipang, (2022); (Putra et al., 2020). Graduate students, in particular, are expected to not only acquire subject matter expertise but also develop the capacity for self-regulated learning and innovative problem-solving. Heutagogy addresses this need by shifting the focus from content delivery to fostering learners' capacity to define their learning objectives, choose their resources, and evaluate their progress (Blaschke, 2012).

Material Development classes are a vital component of graduate programs in education, as they prepare future educators to design, evaluate, and adapt instructional resources. These classes traditionally rely on instructor-led frameworks that provide structured guidance on principles, techniques, and best practices for material design (Jaya et al., 2022). While this method ensures standardization, it may limit opportunities for students to engage in the kind of experiential and reflective learning heutagogy advocates. Previous studies suggest that integrating heutagogical principles in graduate education encourages learners to engage in deeper reflection, critical inquiry, and collaborative knowledge construction, aligning well with the goals of Material Development courses (Blaschke, 2012; Canning, 2020). Heutagogy builds on the principles of andragogy, which emphasizes the self-directed nature of adult learners. However, it extends beyond andragogy by not only recognizing learners' autonomy but also empowering them to take charge of the learning process itself. Key elements of heutagogy include learner-defined learning contracts, flexible learning paths, and assessment approaches that prioritize self-reflection over external validation (Canning, 2010). Research by (Canning, 2010) found that students exposed to heutagogical practices demonstrated increased confidence in managing complex learning tasks and greater resilience in facing academic challenges.

In the specific context of material development, heutagogy offers unique potential to transform how graduate students approach the creation and evaluation of educational resources. A study by Nikmohammadi et al., (2024) highlighted that students who experienced heutagogical approaches in curriculum design reported

heightened engagement and a deeper understanding of the interplay between theory and practice. Similarly, Putra et al., (2020) emphasized the role of heutagogy in fostering creativity and adaptability in educational design, key competencies for educators tasked with addressing diverse learner needs. Despite these promising findings, empirical research on heutagogy's integration into specific courses, such as Material Development, remains limited. This gap underscores the importance of examining learners' perceptions, as their attitudes and experiences provide critical insights into the feasibility and effectiveness of such pedagogical innovations.

While the benefits of heutagogy are well-documented, its implementation is not without challenges. Critics argue that heutagogy requires a level of learner maturity and self-discipline that may not be uniformly present among students (Lapele et al., 2022). Furthermore, educators must possess the skills and mindset to facilitate self-determined learning environments, which involves relinquishing traditional authority roles and embracing a collaborative partnership with learners. In material development classes, this transition may involve reimagining assessment criteria, incorporating student-driven projects, and leveraging technology to support personalized learning paths. The integration of heutagogy in material development classes also presents significant opportunities (Asad & Malik, 2023). Graduate students, by virtue of their advanced academic standing, are generally better positioned to engage in self-directed learning. They bring prior knowledge, professional experiences, and intrinsic motivation that can be harnessed to explore innovative approaches to material design. Moreover, Preece & Hamed, (2020) mentioned that heutagogical practices align with the demands of contemporary educational settings, where educators are expected to be adaptive, technologically savvy, and responsive to diverse learner needs.

This study seeks to critically examine graduate students' perceptions of the integration of heutagogy in Material Development classes. Specifically, it aims to explore how students experience the shift from traditional instructional paradigms to self-determined learning, identify the perceived benefits and challenges, and evaluate the implications for pedagogical practice. By situating the research within the broader discourse on heutagogy and drawing on empirical findings from related contexts, this study contributes to the growing body of knowledge on learner-centered education. The significance of this research lies in its potential to inform curriculum design and teaching strategies in graduate education. By understanding students' perspectives, educators can make informed decisions about the feasibility and effectiveness of heutagogical approaches. Additionally, the findings may provide practical recommendations for integrating heutagogy into other courses, paving the way for a more holistic and transformative educational experience.

Review of Related Literature

The Heutagogy Approach in Higher Education

Heutagogy, or self-determined learning, has emerged as a transformative approach in education that prioritizes learner autonomy, flexibility, and the

development of critical, adaptive skills (D'Souza, 2024). Originating from constructivist theory, heutagogy challenges traditional pedagogies by positioning students as active agents in designing their own learning processes (Jaya et al., 2022). Canning, (2010) who also introduced the concept, emphasized that heutagogy is particularly suitable for adult learners as it leverages their prior knowledge, life experiences, and intrinsic motivation. In higher education, heutagogy has been increasingly recognized for its ability to promote deeper learning, self-reflection, and resilience qualities essential in a rapidly evolving world (Blaschke, 2012).

Research indicates that heutagogical practices foster significant shifts in students' learning experiences. Asad & Malik, (2023) observed that students exposed to heutagogical principles demonstrated improved problem-solving abilities and heightened engagement with learning materials. These students also reported greater confidence in navigating uncertain or complex tasks, highlighting the role of heutagogy in preparing learners for dynamic professional environments. Similarly, Preece & Hamed, (2020) found that integrating heutagogy into graduate programs encouraged students to take ownership of their academic and professional development, resulting in more personalized and meaningful learning outcomes. While heutagogy offers numerous benefits, its adoption in higher education is not without challenges. A study by Chamo et al., (2023) revealed that some learners struggle with the high degree of independence and self-regulation required in heutagogical settings. Further, Blaschke & Marín, (2020) mentioned that, for educators, the transition from instructor-led frameworks to facilitative roles demands a shift in mindset and teaching practices, which can be resource-intensive and complex. Despite these challenges, the literature consistently underscores the potential of heutagogy to address the limitations of traditional pedagogies, particularly in fostering lifelong learning competencies in graduate students.

Material Development Classes in Graduate Education

Material Development classes are a cornerstone of graduate programs in education, designed to equip students with the skills to create, adapt, and evaluate instructional resources. These classes traditionally follow structured, instructor-led models that emphasize theoretical foundations and practical applications of material design (Glassner & Back, 2020). While this approach ensures standardization and coverage of key concepts, it may restrict opportunities for students to engage in exploratory, reflective, and creative learning processes. Recent studies have called for more learner-centered approaches in Material Development to better align with the diverse needs and experiences of graduate students (Al-rahmi et al., 2021). Integrating heutagogy into Material Development classes has been proposed as a way to enhance student engagement and foster innovation in instructional design. Halim et al., (2023) highlighted that heutagogical strategies in curriculum design promote creativity and adaptability, essential competencies for educators in today's diverse classrooms. By empowering students to take charge of their learning objectives, heutagogy encourages them to explore novel solutions and critically evaluate their work, aligning with the iterative nature of material development.

Empirical evidence supports the effectiveness of learner-centered approaches in Material Development classes. For instance, a study by Noor et al., (2022) found that graduate students who participated in self-directed projects reported increased motivation, a deeper understanding of theoretical principles, and improved ability to apply these principles in real-world contexts. Similarly, research by Blaschke, (2012) emphasized the role of heutagogy in fostering collaboration and peer learning, both of which are critical in the design and evaluation of instructional materials.

METHOD

This research employed a descriptive qualitative method to explore graduate students' perceptions toward the integration of the heutagogy approach in Material Development classes. The descriptive qualitative approach was deemed appropriate as it enables an in-depth examination of participants' experiences, opinions, and interpretations, providing rich insights into the phenomenon under investigation (Creswell & Poth, 2016). The participants were 15 doctoral students enrolled in a Material Development course in a graduate program at a university in Indonesia. These students were purposively selected to ensure they had adequate exposure to the heutagogical approach in the course. Among the 15 participants, five students (coded as I1, I2, I3, I4, and I5) were chosen as interviewees. The selection was based on their varied academic backgrounds and levels of engagement during the course, allowing for a diverse range of perspectives. Two primary instruments were utilized in this study:

Questionnaire

A Likert scale questionnaire was administered to all 15 participants to capture their perceptions of the heutagogy approach in the Material Development class. The questionnaire consisted of 10 items divided into three main categories: Engagement and autonomy (e.g., The heutagogy approach allowed me to take charge of my learning goals). Relevance and applicability (e.g., The heutagogical activities helped me connect theoretical concepts to real-world applications). Challenges and support (e.g., I found it difficult to adjust to the self-determined learning approach). Each category and item were adapted from (Rusli et al., 2020) and (Muslieah et al., 2022), Moreover, each item had four response options on a Likert scale, ranging from 1 (Strongly Disagree) to 4 (Strongly Agree), ensuring participants were not given a neutral option to encourage decisive responses.

Semi-Structured Interviews

Semi-structured interviews were conducted with the five selected participants (I1-I5). These interviews aimed to gain deeper insights into students' experiences and perceptions, particularly regarding their engagement, challenges, and perceived benefits of the heutagogy approach (Creswell & Poth, 2016). The interviews were conducted individually and lasted approximately 30-45 minutes each. They were audio-recorded with participants' consent and later transcribed verbatim for analysis.

Data analysis involved both quantitative and qualitative techniques: Questionnaire Analysis, the responses from the Likert-scale questionnaire were

analyzed descriptively. Frequency and percentage distributions were calculated for each item to identify trends in students' perceptions. The data were further grouped into themes corresponding to the three main categories (engagement and autonomy, relevance and applicability, and challenges and support). Thematic Analysis of Interviews, the interview data were analyzed using thematic analysis to identify recurring patterns and themes. The analysis followed these steps: Familiarization: Transcripts were read multiple times to gain an understanding of the data. Coding: Initial codes were assigned to meaningful segments of the data, focusing on keywords and phrases related to students' perceptions and experiences. Theme Development: Codes were organized into overarching themes, such as "enhanced creativity," "struggles with autonomy," and "applicability to real-world contexts". Review and Refinement: Themes were reviewed to ensure they accurately reflected the data and research objectives.

Ethical Considerations

Ethical protocols were strictly observed throughout the study. Informed consent was obtained from all participants before data collection. They were assured of their right to withdraw at any stage and the confidentiality of their responses. Data were anonymized, and results were reported in aggregate to protect participants' identities. Trustworthiness of the Study, to ensure the credibility and reliability of the findings, the following measures were taken: Triangulation: Data from questionnaires and interviews were cross-checked to validate findings. Member Checking: Participants reviewed the interview transcripts and preliminary interpretations to ensure accuracy. Peer Debriefing: The research process and findings were discussed with colleagues to eliminate bias and enhance objectivity.

FINDINGS AND DISCUSSION

This section presents the results of the study aimed at exploring graduate students' perceptions toward the integration of the heutagogy approach in a Material Development class. The primary objective of the research was to understand how students perceive the heutagogy approach in terms of its impact on their learning engagement, critical thinking, skill development, and applicability beyond the classroom. By investigating these perceptions, the study sought to provide insights into the effectiveness of the heutagogy approach in fostering self-directed learning, aligning with doctoral-level educational goals, and addressing the dynamic needs of material development education.

As heutagogy emphasizes learner autonomy, self-determination, and active participation, the findings highlight how these principles are manifested in the students' experiences within the Material Development class. The study used a descriptive qualitative methodology with data collected through a Likert-scale questionnaire and semi-structured interviews. The questionnaire was designed to assess students' views across three categories:

1. Understanding and Engagement with the Heutagogy Approach.
2. Impact on Critical Thinking and Skills Development.

3. Perceived Effectiveness and Application Beyond the Classroom.

This section will elaborate on the findings in detail, presenting data from both the questionnaire and interviews to provide a balanced and critical interpretation of graduate students' perceptions of the heutagogy approach.

Findings

Table 1 presents the findings on postgraduate students' perceptions of their understanding and engagement with the heutagogy approach in a Material Development class. The data reflect how the approach promotes responsibility, enhances understanding of complex concepts, and fosters connections between theoretical and practical applications. Most respondents agreed or strongly agreed that heutagogy aligns with their personal learning goals and motivates them to explore beyond course requirements. The high percentage of positive responses underscores the relevance of heutagogy in fostering self-directed learning and its potential to enhance student engagement and comprehension in advanced academic settings.

Table 1. Understanding and Engagement with the Heutagogy Approach

Statement	Option (s)			
	Strongly Agree	**Agree**	**Disagree**	**Strong Agree**
The heutagogy approach encourages me to take greater responsibility for learning.	60%	40%	0%	0%
The heutagogy approach helps me understand complex material development concepts more effectively.	47%	53%	0%	0%
Self-directed learning within heutagogy aligns well with my personal learning goals in this class.	53%	47%	0%	0%
Heutagogy enables me to connect theoretical concepts to practical, real-world applications.	67%	33%	0%	0%
The heutagogy approach motivates me to seek additional resources beyond course requirements.	73%	27%	0%	0%

The findings reveal that doctoral students hold a positive perception of the heutagogy approach in the Material Development class, particularly in fostering responsibility, understanding complex concepts, and encouraging self-directed learning. A significant 60% of respondents strongly agreed that the approach promotes greater responsibility in their learning process, with the remaining 40% agreeing. This result underscores heutagogy's alignment with autonomous learning, a critical skill for advanced academic pursuits. Furthermore, 47% strongly agreed, and

53% agreed that heutagogy aids in understanding complex material development concepts. This suggests that the self-directed nature of the approach effectively supports learners in navigating intricate academic material, promoting deeper engagement with course content.

The alignment of self-directed learning with personal goals garnered strong agreement from 53% of participants, while 47% agreed. This balance indicates that heutagogy's flexibility caters well to individual learning preferences, enhancing its relevance and applicability. Additionally, 67% strongly agreed, and 33% agreed that heutagogy bridges theoretical knowledge and real-world applications, highlighting its practical value. Lastly, the approach's ability to motivate students to seek additional resources was the most agreed-upon statement, with 73% strongly agreeing. This result reflects heutagogy's strength in fostering intrinsic motivation and curiosity, essential traits for doctoral-level learners.

Table 2 highlights the perceptions of doctoral students regarding the heutagogy approach's influence on their critical thinking and skills development in a Material Development class. The responses illustrate how this learner-centered approach fosters independent thought, problem-solving abilities, and adaptability in learning strategies. Notably, the majority of students agreed or strongly agreed that heutagogy enhances their capacity for reflection and the application of new strategies in material development. These findings underscore the pivotal role of heutagogy in equipping learners with essential competencies, emphasizing its value in higher education contexts focused on innovation and self-directed growth.

Table 2. Impact on Critical Thinking and Skills Development

Statement	Option (s)			
	Strongly Agree	**Agree**	**Disagree**	**Strong Agree**
The heutagogy approach challenges me to think critically and independently.	67%	33%	0%	0%
Heutagogy has enhanced my problem-solving abilities in creating or improving learning materials.	47%	53%	0%	0%
Heutagogy has significantly improved my self-assessment and reflection skills.	53%	47%	0%	0%
I have developed new strategies for organizing and applying information.	60%	40%	0%	0%
Heutagogy has influenced my ability to adapt learning strategies for material development.	47%	53%	0%	0%

The data from Table 2 highlights the impact of the heutagogy approach on critical thinking and skills development among doctoral students in a Material Development class. The responses reflect a strong agreement that heutagogy fosters critical and independent thinking, with 67% of participants strongly agreeing and 33%

agreeing. This indicates that most students recognize the approach as effective in challenging their intellectual engagement.

Problem-solving abilities in the context of creating or improving learning materials were another critical area, with 47% strongly agreeing and 53% agreeing. This balance underscores that while some students strongly resonate with this benefit, others still perceive it positively but with varying degrees of intensity. Similarly, the development of self-assessment and reflection skills saw 53% strongly agreeing and 47% agreeing, demonstrating the heutagogy approach's influence on personal growth and progress evaluation.

The ability to organize and apply information was also significantly supported, with 60% of students strongly agreeing and 40% agreeing. Finally, the approach's influence on adaptability in learning strategies was recognized by 47% strongly agreeing and 53% agreeing. Overall, the data reflects that heutagogy effectively enhances critical thinking, problem-solving, self-assessment, organizational skills, and adaptability, positioning students for success in complex academic tasks.

Table 3 presents findings on the perceived effectiveness and application of the heutagogy approach beyond the classroom. It highlights students' views on how this methodology benefits their academic and professional development. The majority of respondents expressed strong agreement that heutagogy equips them with adaptable skills, fosters innovation, and enhances their ability to mentor others. A notable 80% strongly agreed that the approach is suitable for doctoral-level classes. These results underscore the broader applicability of heutagogy, emphasizing its potential to prepare learners for interdisciplinary and real-world challenges in material development and related fields.

Table 3. Perceived Effectiveness and Application Beyond the Classroom

Statement	Option (s)			
	Strongly Agree	**Agree**	**Disagree**	**Strong Agree**
The heutagogy approach will benefit my future academic or professional career.	73%	27%	0%	0%
Heutagogy has prepared me to adapt and innovate in educational material development.	67%	33%	0%	0%
Understanding heutagogy enhances my ability to mentor other learners.	47%	53%	0%	0%
Heutagogy has provided me with transferable skills for interdisciplinary projects.	53%	47%	0%	0%
Overall, heutagogy is a suitable and effective methodology for doctoral-level classes.	80%	20%	0%	0%

The findings from the questionnaire data in Table 3 reveal overwhelmingly positive perceptions of the heutagogy approach in its application beyond the

classroom. A significant majority (73%) of participants strongly agreed that the heutagogy approach would benefit their future academic or professional careers, highlighting its potential to enhance lifelong learning and professional adaptability. Similarly, 67% strongly agreed that this approach has prepared them to adapt and innovate in educational material development, indicating its relevance in fostering creativity and responsiveness to emerging trends.

In terms of mentorship, 47% strongly agreed, and 53% agreed that understanding heutagogy enhances their ability to mentor other learners, demonstrating the approach's utility in fostering collaborative and supportive educational environments. Additionally, the transferable skills gained through heutagogy were recognized, with 53% strongly agreeing and 47% agreeing that these skills could be applied to interdisciplinary projects, reflecting its broader applicability.

The most notable result was for the statement, "Overall, heutagogy is a suitable and effective methodology for doctoral-level classes," where 80% of respondents strongly agreed, and 20% agreed. This indicates a near-unanimous endorsement of the approach's effectiveness and suitability for advanced academic settings, underscoring its potential as a transformative learning methodology.

Discussion

The discussion aligns with the research objectives, which include examining students' understanding and engagement with the heutagogy approach, assessing its impact on critical thinking and skills development, and evaluating its perceived effectiveness and applicability beyond the classroom.

Understanding and Engagement with the Heutagogy Approach

The findings indicate that graduate students demonstrate high levels of understanding and engagement with the heutagogy approach. Notably, 60% of respondents strongly agreed that the approach encouraged them to take greater responsibility for their learning. This result aligns with studies by Exter & Ashby, (2022) and Blaschke & Marín, (2020), who emphasize that heutagogy fosters learner autonomy and self-determined learning. Similarly, I3 said that:

> "*As someone who has always relied on structured learning, the heutagogy approach was initially unfamiliar but ultimately transformative. It required me to take full responsibility for my learning, which was challenging at first. However, as I engaged with it, I found it empowering to set my own goals and explore materials that aligned with my interests. This approach helped me connect theoretical concepts from the Material Development class to practical examples, making the learning more meaningful. Although I struggled initially, the process of adapting to self-directed learning improved my confidence and prepared me for real-world academic challenges*"

Moreover, students perceived the heutagogy approach as particularly effective in helping them connect theoretical concepts to practical applications, with 67% strongly agreeing. I2 further support that:

> "*The heutagogy approach significantly deepened my engagement with the class. By encouraging self-directed exploration, it allowed me to align my learning process with personal goals. For instance, I applied theoretical concepts from the course to develop a material design project, which clarified complex ideas and made them more relevant. The freedom to explore beyond course requirements was refreshing and motivated me to be proactive. That said, transitioning from a traditional, teacher-centered model to heutagogy took some adjustment, and I think initial guidance could have eased the process. Nevertheless, this method ultimately expanded my perspective and fostered lifelong learning skills*"

Align with the findings and above statement, this suggests that heutagogy bridges the gap between academic content and real-world contexts, supporting the assertion by Kung-Teck et al., (2020) that heutagogy is effective in preparing learners for complex, dynamic environments. However, some students (40%) merely agreed rather than strongly agreeing on their overall understanding and engagement. This disparity may reflect differences in prior exposure to self-directed learning.

> "*I strongly believe the heutagogy approach is a game-changer in education. In this class, it encouraged me to go beyond surface-level understanding and take control of my learning journey. I appreciated how it connected abstract theories to practical, real-world applications. For example, I used what I learned in class to design materials for a real-life project, which made the content far more relevant. However, I noticed that students with limited experience in self-directed learning might initially feel overwhelmed. While I adjusted quickly, I think providing a structured introduction to this approach could help students transition more effectively*" (Added I5).

Students accustomed to more traditional pedagogical methods might have found the transition to heutagogy challenging, underscoring the need for initial guidance in implementing this approach.

Impact on Critical Thinking and Skills Development

The heutagogy approach positively influenced critical thinking and skill development among participants. The majority (67%) strongly agreed that it challenged them to think critically and independently about material development strategies. These findings align with respondent statement and research by Akyildiz, (2019) and Chamo et al., (2023), which highlights that heutagogy empowers learners to engage in deeper cognitive processes and problem-solving.

> "*The heutagogy approach significantly influenced my ability to think critically and independently. Before the course, I often relied on external guidance when faced with complex material development strategies. However, through heutagogy, I was*

encouraged to take more responsibility for my learning. The self-directed nature of the approach forced me to analyze situations from various angles, which strengthened my problem-solving abilities. I found myself exploring multiple resources beyond what was required, reflecting on what I learned, and critically evaluating my decisions in the development process. This shift was evident when I worked on creating a new learning module; I applied critical thinking not only to design the material but also to question its effectiveness and potential impact. The ability to reflect on my progress and make adjustments has been key to my learning journey. Moreover, I feel that the heutagogy approach has equipped me with essential transferable skills, particularly in organizing information and applying it contextually. However, while I appreciate the benefits of self-directed learning, I recognize that there are moments when more structured guidance could further enhance my ability to adapt and apply new strategies effectively" (I1 Claimed).

The results also underscore the approach's role in enhancing self-assessment and reflection, with 53% of respondents strongly agreeing. This is consistent with self-determined learning theory, which emphasizes metacognition as a core element of heutagogy (Lynch et al., 2021); (Blaschke, 2012); (D'Souza, 2024). Graduate students reported improved abilities to organize and apply information relevant to material development, supporting the claim that heutagogy fosters transferable skills. I4 further support:

"*One of the most striking impacts of the heutagogy approach was on my critical thinking and skill development. It encouraged me to step beyond surface-level learning and engage in deeper reflection and evaluation. For instance, during the development of course materials, I was not only responsible for designing content but also for identifying the gaps in existing material, finding creative ways to address those gaps, and ensuring that the material would be adaptable in various learning environments. This process sharpened my analytical skills and allowed me to assess both theoretical and practical aspects of material development more effectively. Additionally, the self-assessment component of heutagogy proved invaluable. By reflecting on my learning and progress, I developed a clearer understanding of my strengths and weaknesses. While I did feel confident in my ability to critically assess and revise my work, there were times when I found it challenging to apply the strategies I had learned across different tasks. This suggests that further scaffolding and feedback would help bridge the gap between understanding and application, making it easier to adjust my approach to different learning contexts*"

While the findings are overwhelmingly positive, it is worth noting that 53% of respondents agreed (rather than strongly agreed) that they had enhanced their ability to adapt learning strategies. This suggests room for improvement in the implementation of heutagogy, particularly in scaffolding activities that help students transition from dependent to independent learning styles. Providing tailored feedback and resources could further strengthen these outcomes.

Perceived Effectiveness and Application Beyond the Classroom

The findings reveal strong support for the heutagogy approach's applicability beyond academic settings. A significant 73% of participants strongly agreed that heutagogy would benefit their future academic or professional careers. This aligns with studies by (Mannan et al., 2023), which argue that heutagogy prepares learners for lifelong learning and professional adaptability. Furthermore, 67% strongly agreed that the approach prepared them to adapt and innovate in educational material development, reflecting its relevance in equipping students with skills for evolving educational trends. Above statement is align and supported by A2 and A1 which:

> "*I strongly believe that the heutagogy approach has immense value beyond the classroom. It has taught me to take greater responsibility for my learning, which is a critical skill in both academic and professional environments. The ability to self-direct my learning and adapt to new developments in material development has already started to positively impact my approach to projects in my professional career. By encouraging innovation and critical thinking, heutagogy has empowered me to navigate complex situations, making it clear that the skills I gained are transferable to my future career*" (A2 statement)

> "*The heutagogy approach has been instrumental in shaping how I think about my future. It has helped me understand the need to innovate continuously in the educational material development field. I feel confident that the skills and knowledge I've gained will help me adapt to evolving educational trends. Moreover, the emphasis on self-directed learning has given me the autonomy to think critically and solve problems independently, which is crucial for my academic and professional growth. These qualities are not only beneficial for my current studies but will also enhance my career moving forward*" (A1 statement).

Participants also recognized the approach's broader utility, with 53% strongly agreeing that it provided transferable skills for interdisciplinary projects. This finding resonates with Lapele et al., (2022) and Moore, (2020) assertion that heutagogy fosters competencies applicable to diverse fields, making it particularly valuable in multidisciplinary environments. Moreover, the high agreement (80% strongly agreeing) regarding the suitability of heutagogy for doctoral-level classes highlights its effectiveness in advanced academic contexts. Similarly, A4 and A5 added:

> A4: "*After experiencing heutagogy in the Material Development class, I can confidently say that the skills I've gained are not limited to academic settings. The approach has equipped me with the ability to manage and organize information independently, which will be invaluable in both my professional and academic future. Additionally, I have learned how to innovate in educational material development, which will allow me to adapt to changes in my field. The skills learned through heutagogy such as self-assessment, problem-solving, and critical thinking are highly transferable and will be beneficial in any interdisciplinary project I engage in*".

A5: "I found the heutagogy approach incredibly valuable in helping me develop skills that I can apply beyond the classroom. As I progress in my academic and professional career, I see how self-directed learning, critical thinking, and innovation are essential to success. This approach has already helped me adapt to new trends in material development and prepared me to face challenges in my future career. The ability to mentor and support others using heutagogical principles is something I am still developing, but I recognize its potential for collaborative work, and I plan to further explore this in future endeavors"

Nevertheless, the data also suggest potential challenges. While all respondents expressed positive perceptions, the lower percentage of strong agreement in some items (e.g., mentoring other learners) indicates that some students may feel less confident in applying heutagogical principles in collaborative settings. This could stem from varying levels of readiness to assume mentorship roles, suggesting a need for incorporating peer-learning components in heutagogical frameworks.

The findings indicate that graduate students perceive the heutagogy approach as highly effective in fostering understanding, critical thinking, and transferable skills in a Material Development class. While the results affirm the suitability of heutagogy for doctoral-level education, they also highlight areas for improvement, particularly in providing support for collaborative learning and mentoring roles. These insights contribute to the growing body of literature advocating for self-determined learning as a transformative methodology in higher education. This study is limited by its small sample size, which may affect the generalizability of the findings. Future research could expand the participant pool and include longitudinal studies to assess the long-term impact of heutagogy on academic and professional outcomes. Additionally, comparative studies could explore the effectiveness of heutagogy relative to other learner-centered approaches, such as andragogy and pedagogy.

CONCLUSION AND CONSIDERATION

The findings revealed that the heutagogy approach was perceived as highly effective by the majority of respondents, particularly in fostering self-directed learning, critical thinking, and innovation in material development. A significant portion of participants indicated that heutagogy would benefit their future academic and professional careers, with 73% strongly agreeing that the approach would prepare them for lifelong learning and adaptability in evolving educational trends. Additionally, students acknowledged the broader utility of heutagogy in interdisciplinary projects, recognizing its ability to develop transferable skills. The study also highlighted the suitability of the heutagogy approach for doctoral-level classes, with 80% of respondents strongly agreeing that it was an effective methodology for advanced academic contexts. However, while the overall response was positive, there was a slight disparity in perceptions, particularly regarding students' readiness to mentor others using heutagogical principles. This suggests a potential gap in students' confidence in applying heutagogy in collaborative settings, which could be addressed through the incorporation of peer-learning and mentorship

components into the curriculum. Overall, the findings suggest that heutagogy is a valuable and transformative approach for graduate-level education, particularly in fostering independent learning and critical thinking skills necessary for professional success in material development and other fields.

While the study's findings are promising, it is important to consider the limitations of the sample size and the potential for variability in perceptions based on prior experiences with self-directed learning. Further research with a larger and more diverse sample would provide deeper insights into the broader applicability of heutagogy. Future research could explore how integrating peer-learning activities and mentorship into the heutagogy approach can further enhance students' ability to apply its principles in collaborative settings. Additionally, providing targeted training on mentorship could support students in confidently implementing heutagogy as a teaching method.

REFERENCES

Akyildiz, S. T. (2019). Do 21st Century Teachers Know about Heutagogy or Do They Still Adhere to Traditional Pedagogy and Andragogy?. *International Journal of Progressive Education*, *15*(6), 151–169.

Al-rahmi, A. M., Al-rahmi, W. M., Alturki, U., Aldraiweesh, A., Almutairy, S., & Al-adwan, A. S. (2021). Exploring the factors affecting mobile learning for sustainability in higher education. *Sustainability (Switzerland)*, *13*(14). https://doi.org/10.3390/SU13147893

Asad, M. M., & Malik, A. (2023). Cybergogy paradigms for technology-infused learning in higher education 4.0: a critical analysis from global perspective. *Education and Training*, *65*(6–7), 871–890. https://doi.org/10.1108/ET-08-2022-0324/FULL/XML

Blaschke, L. M. (2012). Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning. *The International Review of Research in Open and Distributed Learning*, *13*(1), 56–71. https://doi.org/10.19173/IRRODL.V13I1.1076

Blaschke, L. M., & Marín, V. I. (2020). Aplicaciones de la heutagogía en el uso educativo de e-portfolios. *Revista de Educación a Distancia (RED)*, *20*(64). https://doi.org/10.6018/RED.407831

Canning, N. (2010). Playing with heutagogy: exploring strategies to empower mature learners in higher education. *Journal of Further and Higher Education*, *34*(1), 59–71. https://doi.org/10.1080/03098770903477102

Chamo, N., Biberman-Shalev, L., & Broza, O. (2023). 'Nice to Meet You Again': When Heutagogy Met Blended Learning in Teacher Education, Post-Pandemic Era. *Education Sciences 2023, Vol. 13, Page 536*, *13*(6), 536. https://doi.org/10.3390/EDUCSCI13060536

Creswell, J. W., & Poth, C. N. (2016). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (Fourth Edi). SAGE Publications Inc.

D'Souza, R. (2024). Understanding Heutagogy: A New "Gogy." *Journal of Research Initiatives*, *8*(4). https://digitalcommons.uncfsu.edu/jri/vol8/iss4/3

Exter, M., & Ashby, I. (2022). Lifelong Learning of Instructional Design and Educational Technology Professionals: a Heutagogical Approach. *TechTrends*, *66*(2), 254–264. https://doi.org/10.1007/S11528-021-00657-X/METRICS

Glassner, A., & Back, S. (2020). Exploring heutagogy in higher education: Academia meets the zeitgeist. *Exploring Heutagogy in Higher Education: Academia Meets the Zeitgeist*, 1–210. https://doi.org/10.1007/978-981-15-4144-5/COVER

Halim, A., Nur, S., Vega, N. De, Nasta, M., & Nurfadhilah, A. S. (2023). Exploring Heutagogy in Indonesian Higher Education: Cultural Challenges and Advantages in Mobile-Based English as a Foreign Language (EFL) Teaching. *Voices of English Language Education Society*, *7*(3), 557–571. https://doi.org/10.29408/VELES.V7I3.22026

Jaya, S., Zaharudin, R., Yaakob, M. N., & Ithnin, M. A. (2022). Application of Fuzzy Delphi Method (FDM) in Development of the Heutagogical and Technological Practices in Next Generation Learning Spaces (NGLS) Framework. *ICCCM Journal of Social Sciences and Humanities* , *1*(2), 39–51. https://doi.org/10.53797/ICCCMJSSH.V1I2.5.2022

Kung-Teck, W., Muhammad, M. binti, Abdullah, N. binti, & Hamdan, A. (2020). Mobile-Heutagogical Practices among Student Teachers: Its Pedagogical Affordances and Challenges. *International Journal of Interactive Mobile Technologies*, *14*(2), 130–143. https://doi.org/10.3991/IJIM.V14I02.11819

Lapele, F., Kartowagiran, B., Haryanto, H., & Prihono, E. W. (2022). Heutagogy: The Most Holistic Approach Utilizing Technology in Learning. *Proceedings of the 5th International Conference on Current Issues in Education (ICCIE 2021)*, *640*, 154–159. https://doi.org/10.2991/ASSEHR.K.220129.028

Lengkoan, F., Basri, M., Nur, S., Ali, N. N., & Maru, M. G. (2024). Higher Education Teachers' Perception and Use of Project-Based Learning in Teaching English. *Jurnal Lingua Idea*, *15*(1), 1–15. https://doi.org/10.20884/1.JLI.2024.15.1.9698

Lengkoan, F., & Rombepajung, P. A. (2022). Teachers' Perception of Online Learning in The Pandemic Era. *Jurnal Lingua Idea*, *13*(1), 1–11. https://doi.org/10.20884/1.JLI.2022.13.1.4301

Liando, N. V. F., & Tatipang, D. P. (2022). English or Indonesian Language? Parents' Perception Toward Children's Second Language Learning Context. *Jurnal Lingua Idea*, *13*(1), 61–75. https://doi.org/10.20884/1.JLI.2022.13.1.5749

Lynch, M., Sage, T., Hitchcock, L. I., & Sage, M. (2021). A heutagogical approach for the assessment of Internet Communication Technology (ICT) assignments in higher education. *International Journal of Educational Technology in Higher Education*, *18*(1), 1–16. https://doi.org/10.1186/S41239-021-00290-X/TABLES/2

Mannan, E. F., Nurpratama, M. R., Shuhidan, S. M., & Masrek, M. N. (2023). The relationship between digital literacy and heutagogy learning: a pilot study among college students in Indonesia. *Library Management*, *44*(3–4), 246–260. https://doi.org/10.1108/LM-06-2022-0062/FULL/XML

Moore, R. L. (2020). Developing lifelong learning with heutagogy: contexts, critiques, and challenges. *Distance Education*, *41*(3), 381–401. https://doi.org/10.1080/01587919.2020.1766949

Muslieah, N., Kamal, M., Hussin, Z., & Sulaiman, A. M. (2022). Students ' Perception of The Implementation of Heutagogical Approach in Online Teaching and Learning by Islamic Education Teachers. *Mathematical Statistician and Engineering Applications*, *71*(3), 1763–1774. https://doi.org/10.17762/MSEA.V71I3.1505

Nikmohammadi, Z., shafiee, N., & Araghieh, A. (2024). Designing a Heutagogy Curriculum Template for the Second Level of High School. *Iranian Journal of Educational Research*, *3*(3), 189–204. http://ijer.hormozgan.ac.ir/article-1-197-en.html

Noor, N. M., Shafie, L. A., & Kamarulzaman, N. M. (2022). Heutagogical Approach in Online English Pronunciation Learning: Student Awareness Survey. *Journal of Computing Research and Innovation*, *7*(2), 379–393. https://doi.org/10.24191/JCRINN.V7I2.333

Preece, A. S., & Hamed, P. K. (2020). Andra-Heutagogy: A New Approach for Teacher Training. *International Journal of Education and Pedagogy*, *2*(1), 98–105. https://myjms.mohe.gov.my/index.php/ijeap/article/view/8488

Putra, A. B. N. R., Syafrudie, H. A., Nidhom, A. M., Smaragdina, A. A., Md Yunos, J. B., Sembiring, A. I., & Eriyanto. (2020). The innovation of module training based heutagogy as an acceleration for increasing pedagogical supremacy of vocational education lecturers in the industrial revolution 4.0. *Journal of Physics: Conference Series*, *1456*(1), 012043. https://doi.org/10.1088/1742-6596/1456/1/012043

Rusli, R., Rahman, A., & Abdullah, H. (2020). Student perception data on online learning using heutagogy approach in the Faculty of Mathematics and Natural Sciences of Universitas Negeri Makassar, Indonesia. *Data in Brief*, *29*, 105152. https://doi.org/10.1016/J.DIB.2020.105152