

HEUTAGOGY AS A TRAINING APPROACH FOR TEACHERS IN THE ERA OF SOCIETY 5.0

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ABSTRACT

In the age of the 5.0 society era, a teacher's job description should include lifelong learners, learning leaders, instructors of learning resources, network builders, and communication facilitators. This study identifies the difficulties that the 5.0 society era poses and presents a learner-centered approach to education that emphasizes self-directed learning and the development of critical thinking skills, teacher preparation, and an overview of the implementation process. To achieve these goals, a thorough analysis of the literature was conducted. The findings showed that training programmes using a heutagogical approach should be taken into account because it is a self-determined learning process, and its implementation steps include enhancing digital literacy, developing a full and trustworthy learning management system platform, and implementing heutagogical teacher training. It is expected that heutagogy can be a substitute method of teacher preparation to create instructors who are ready for the learning difficulties of the 5.0 society era.

Keywords: *teacher, society era 5.0, training approach, heutagogy*

INTRODUCTION

The 2018 Global Competitiveness Report (World Economic Forum) shows that Indonesia ranks 45th out of 140 countries. This ranking is below Malaysia (25) and Thailand (38), while Singapore is in second place among developed countries. When these rankings are examined more closely in specific sectors, Indonesia ranks 68th in innovation capacity, 50th in ICT adoption, and 62nd in skills (Schwab, 2018). One area that is closely related to the quality of human resources is education. A pillar of education is educators or teachers. When viewed from the quality of teachers, the quality of teachers in Indonesia still needs to be improved (Siswandari & Susilaningsih, 2013).

In the context of National Teacher's Day, the Ministry of Education and Culture expressed the need to improve the quality of teachers to prepare the younger generation to face the social and professional life of the 21st century (Jawapos Online, 28 November 2018). This is not an easy challenge because it relates to the teacher's ability to master 21st century skills and live the life of the millennial generation. The total number of teachers in Indonesia is currently around 3.133 million (Kemendikbud, 2017). These teachers cover all levels of education, majors, and from several ministries. Teachers are entitled to participate in skills development programs organized by the government. Great efforts have been made by the government in implementing this skills development program from year to year. This program is often called training (education and training). In the 1980s and 1990s, this program was known as upgrading. Professional development with qualified mentors must be programmed because teachers face very rapid developmental complexities (Andriani, 2010).

The government began to organize a massive training program that required the ongoing participation of all teachers, which was a long series of teacher performance evaluation programs. The government has succeeded

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in organizing education to reach all teachers based on fields and levels of expertise, namely face-to-face methods, full network/online methods, and combined/hybrid methods (Kemendikbud, 2016). Managing online education in a vast country is new. With the results of the Teacher Qualification Test (UKG) and the achievement of certain points, the government considers teachers to have essential competencies (pedagogical and technical) and digital literacy. This program is implemented with all its advantages and disadvantages. Constructive criticism must be conveyed by all parties so that the implementation of similar programs will be better in the future. The online-based education and training program was initiated in 2014 with the introduction of a limited online interaction training program (DIO) (Wahyuningtyas, 2016).

The development of digital technology is currently very advanced. This is because technological developments connect people and devices. The world is connected to a great web. Unlimited learning resources available on laptops and mobile devices. This rapid development of communication is also known as the communication revolution (Zamroni, 2009). If this situation is not handled properly when studying, we will become strangers in the digital era. Therefore, the introduction of digital systems in learning is essential.

Entering the digital world is not easy for teachers. According to Anggaraeni's study (2018), teachers' level of technology and media literacy is only 20-14%. This means that only one-fifth of teachers have technical skills, such as the ability to access, filter, process, and understand information technology. This fact must be a common concern because Indonesia is not always stuck in the past, namely the Industrial Revolution 1.0–4.0. The ability to deal with information technology certainly affects teacher performance. ICT skills management has a positive impact on teacher effectiveness (Destiana & Soenarto, 2014; Marzoan, 2017). This means that the management of essential competencies and ICT competencies are correlated. ICT mastery provides teachers with additional learning resources that enhance their understanding of relevant material. In the 2015-2020 Continuing Learning Teacher and Teacher (PKB) program, most teachers were trained to participate in the program using online methods. In this program, the supervisor accepts and completes learning assignments with the target teacher. Indeed, semi-self-directed learning occurs within this program, minimizing the chaperone role and expanding opportunities for teachers to learn independently.

This assumption assumes that the andragogy self-learning feature has been implemented using a learning management system (LMS). Teachers learn independently from online sources with minimal assistance. The online PKB program also places great emphasis on the teacher's task of self-teaching. Teaching materials are materials needed by the teacher based on the results of the initial test, so that conceptually they are in accordance with learning that teaches material that the teacher does not have. These two programs are considered effective in improving skills (Awaluddin, 2018). Based on these facts, the government launched a digital training program that is close to andragogy. This method can still be used in the next few years to develop self-determined learning and heutagogy. This thinking is necessary because of several factors, namely (1) the rapid development of digital technology; (2) the teacher's central role as a provider of knowledge becomes a guide, discussion guide, and measure of student progress (Zubaidah, 2020); (3) educators, especially teachers, must have good adaptability to serve and adapt to the needs of students; and (4) they must become lifelong learners.

The aims of this study were (1) to identify the challenges of the 5.0 society era for teachers and (2) to provide an overview of the application of a heutagogy approach in teacher education.

This article enlightens and delves into the concept of heutagogy as a cutting-edge training approach for teachers in the context of Society 5.0. As we navigate the ever-evolving landscape of education, it is crucial to explore innovative strategies that empower teachers to adapt and thrive in this new era. Heutagogy, with its emphasis on self-directed learning and critical thinking, offers a promising path for educators to equip themselves with the skills and competencies needed to navigate the complexities of Society 5.0.

In this study, our primary objective is to explore the concept of heutagogy and its relevance as a training approach for teachers. We will delve into its core principles to understand how it aligns with the dynamic nature of Society 5.0. By examining the interplay between heutagogy and the demands of the digital age, we shed light on the transformative potential of heutagogy for teacher training programs.

In addition, we will conduct a comprehensive examination of the benefits and challenges associated with implementing heutagogy in teacher training. We will explore the positive impacts of heutagogy on teacher professional development, student engagement, and the cultivation of lifelong learning skills. Simultaneously, we will address the potential hurdles that may arise during the integration process and propose strategies to overcome them effectively.

To effectively apply heutagogy in the classroom, teachers need to develop specific skills and competencies. Throughout this article, we will identify these essential qualities, ranging from fostering self-directed learning and critical thinking to nurturing digital literacy and adaptability. By providing a comprehensive understanding of these skills, we empower teachers to effectively implement heutagogy and create impactful learning experiences.

Finally, we offer practical recommendations for incorporating heutagogy into teacher training programs. These recommendations will encompass various aspects, including curriculum design, professional development initiatives, and supportive policies. By providing actionable guidance, we strive to support policymakers, education institutions, and teacher training providers in effectively preparing educators to meet the demands of Society 5.0.

This article explores the concept of heutagogy as a training approach for teachers in the era of Society 5.0. In this rapidly evolving digital age, where technology and societal changes are transforming the way we live and work, it is crucial to adapt our educational practices to meet future demands. Heutagogy, a learner-centered approach that emphasizes self-directed learning and critical thinking, has great potential to empower teachers and prepare them for the challenges of Society 5.0.

Throughout this article, we will delve into the concept of heutagogy and its alignment with the principles of Society 5.0. We will explore the potential benefits of adopting heutagogy as a training approach for teachers, examining how it can enhance their professional development and empower them to guide students in becoming independent, lifelong learners. However, we also acknowledge that implementing heutagogy in teacher training programs may pose challenges. We will explore these challenges and propose strategies to address and overcome them.

Furthermore, we will identify the specific skills and competencies that teachers need to develop to effectively apply heutagogy in their classrooms. From fostering self-directed learning to cultivating critical thinking and digital literacy, we highlight the essential qualities that educators should possess to thrive in the Society 5.0 landscape.

To ensure successful integration of heutagogy into existing teacher training programs, we will discuss practical approaches and strategies for implementation. By examining various models and examples, we will provide insights on how heutagogy can be seamlessly incorporated into professional development initiatives, equipping teachers with the necessary tools to navigate the evolving educational landscape.

Finally, we present recommendations for policymakers, education institutions, and teacher training providers to promote the adoption of heutagogy in teacher training programs. These recommendations will focus on creating supportive policies, fostering collaborative networks, and providing resources and training opportunities to empower educators in embracing heutagogy and effectively preparing for the demands of Society 5.0.

RESEARCH METHODS

This study uses the method of literature review. Library research refers to several books and journals related to research problems and objectives. This technique highlights various theories related to the problems faced/researched as reference material in discussing research results (Danial & Wasriah, 2009). Data and statements from journals, books, and scientific conference papers were referenced and analyzed to achieve the research objectives.

During conducting this study, the method employed was a comprehensive literature review. This technique involved a systematic search and analysis of relevant books, journals, and scientific conference papers to gather data and statements that contributed to achieving the research objectives. The literature was selected after careful consideration and adherence to specific criteria.

To select the literature, a rigorous process was followed. The initial step is to identify keywords and key concepts related to the research problem and objectives. These keywords were then used to conduct searches in reputable academic databases, such as Google Scholar, JSTOR, and Scopus. In addition, relevant books and conference proceedings were included in the search.

The criteria for selection were based on the relevance, credibility, and currency of the sources. Only scholarly publications, such as peer-reviewed articles and academic books, were included in the review. The selected literature had to directly address the research problem and objectives, providing valuable insights, theories, and empirical evidence.

The analysis of the literature involved a thorough examination of the selected sources. First, the information gathered from the literature was organized and categorized on the basis of the themes and subtopics relevant to the research. This process facilitated a comprehensive understanding of the different perspectives and theories related to the research problem.

Subsequently, a critical evaluation of the literature was conducted to assess the quality of the sources and the strength of the arguments presented. This involved examining the methodology, theoretical frameworks, and empirical evidence presented in each source. The analysis identified patterns, trends, and gaps in the existing literature, allowing for a comprehensive discussion of the findings. It is worth mentioning that this literature review does not involve primary data collection. Instead, it relies on the synthesis and analysis of existing research to provide a comprehensive understanding of the topic at hand.

FINDINGS AND DISCUSSION

Era of society 5.0

Society 5.0 is a concept that aims to create a human-centered society that balances economic advancement with the resolution of social problems by highly integrating cyberspace and physical space (https://www8.cao.go.jp/cstp/english/society5_0/index.html). It is a society in the technological era where every technology is part of the human being itself, and the main components of Society 5.0 are people who can create new values through technological developments. The concept of Society 5.0 builds upon the foundation of Society 4.0, but with a greater emphasis on the human context and the potential of technology to improve quality of life. Japan has been at the forefront of implementing Society 5.0, successfully integrating technologies such as artificial intelligence and robotics to address societal challenges and enhance human well-being (https://www.hitachi.com/rev/archive/2017/r2017_06/trends/index.html). However, there are still areas where technology has not been fully adopted, leading to disparities in access and use. The benefits of Society 5.0 for technological developments have changed the role of humans in many ways, including the integration of technology into education (<https://www.mdpi.com/2075-4698/12/6/149>). While there are concerns about the

replacement of human tasks by machines, Society 5.0 offers many positive benefits for human life.

Society 5.0 is a concept in which technology makes human life easier and technology becomes a part of human beings. However, this concept has not been implemented in all regions. Some areas are still partly untouched by technology. Society 5.0 is a concept that enables humanity to use modern technology-based science, such as artificial intelligence and robots, to meet needs and make human life easier.

The concept of Society 5.0 is not much different from that of Society 4.0. The difference lies in the context in which it is focused. Society 4.0 focuses on the context of technological development, whereas Society 5.0 focuses more on the human context. Society 5.0 is a society in the technological era, where every technology is part of the human being itself. The main components of Society 5.0 are people who can create new values through technological developments. This development minimizes social inequality and economic problems. Currently, Japan is a country that has successfully implemented Society 5.0. Maybe all this progress sounds a little alarming because human tasks can be easily replaced by machines. However, Society 5.0 offers many positive benefits to human life.

The benefits of Society 5.0 for technological developments have changed the role of humans in many ways. While many jobs are being replaced by machines, this has also meant the development of human skills in new fields. One of them lies in the world of education, where the world of education has been integrated with technology itself. Technological developments are like two currencies with their advantages and disadvantages. However, we are concerned that human tasks can be easily replaced by machines in Society 5.0. However, the concept of Society 5.0 also has various advantages that can improve the quality of our lives as humans.

Teachers feel the direct impact of this era of society 5.0. In education, smart devices, modern learning environments, cloud data storage, and so on are emerging to denote modern, technology-based learning.

The Millennial Generation and Challenges for Teachers

The Millennial Generation presents a challenge for teachers in their professional duties to educate the generation born when the internet was available. The era of society 5.0 has caused changes in all fields with the rapid development of information and communication technology. With the rapid development of information and communication technology after 2000, the term millennium was born. Students are currently referred to as the millennial generation or Generation Z. This generation was born in the 1990s between the ages of 15 and 30 years (Mansyur, 2018). Not only are they referred to as the millennial generation, but they are also often classified as a digital native group/generation. They are true "digital natives." They were born and raised in the digital era, when the internet was born (Hidaya, Qalby, Syech Alaydrus, Darmayanti and Salsabilah, 2019). They communicate through chat apps, watch videos on YouTube, and listen to music on Spotify. They also shop online, transfer money online, and rarely spend cash. All of these activities can be realized thanks to the development of digital technology, especially the Internet, which has become an inseparable part of life.

These kids are very different from their teachers, who are digital immigrants. Digital immigrants are not born in the digital age, but must embrace and adapt to the aspects of technology (Martin, 2011). Digital migrant groups are groups of people who are experiencing a transition from the analog era to the digital era and do not necessarily have mastered digital habits. They require a process of movement and adjustment. The time it takes to adapt varies from person to person.

Most digital immigrant teachers should be able to create an engaging learning environment for digital native students. They could not regress to the attitude of the analog era. The only way for teachers is to dive into the digital world of their students and control it. Digital immigrants need specific methods to teach digital natives (Lee, Choonkeong & Yau, 2016). These are needs that need to be addressed and implemented, and this creates gaps. This gap must be bridged or narrowed so that the digital native generation can thrive by adapting

to digital immigrants. The most likely way to adapt is through study.

According to Law No. 14 of 2005, teachers must have four main competencies: pedagogic competence, professional competence, personal competence, and social competence (Republic of Indonesia, 2005). According to Suyanto and (2013), professional teachers must meet the following requirements: (1) Expert in teaching theory and practice and able to teach knowledge mastered by students; (2) happy to join a professional teacher organization as a driving force and motivation for a better career; and (3) have appropriate teacher training. This refers to the fulfillment of educational tasks and professional career support for a teacher who also works as a professional humanitarian and community worker.

Usman (2006) defines a professional teacher as a person who has special skills and expertise in the field of teacher education to be able to perform his duties and responsibilities as well as possible. To achieve this maximum ability, teachers must always continue to develop their own abilities, considering that the development of knowledge is also fast (Richardo, 2016). As a professional, the addition must master four main competencies. Teachers must also react to the rapid developments of the 21st-century, which also requires several skills. To be able to adapt to the 21st-century, there are three main competencies for teachers (Wardani, 2018) 1. Learning and innovation skills that include critical thinking and problem solving, creativity and innovation, and communication and collaboration; 2. Information, media, and technology literacy, including information, media, and ICT literacy; 3. Life and career skills include adaptability and flexibility, initiative and self-determination, social and intercultural skills, productivity and responsibility, and leadership and responsibility. These three areas of expertise in the 21st-century require teachers to recognize and handle them well. This means that organized learning can occur in an atmosphere that is attractive to millennial students and learning objectives so that students are ready to face the conditions of the 21st century.

Consequences of Learning

The era of society 5.0 has had a significant impact on learning. This effect is reflected in learning behavior, learning materials/media, and learning processes (Wardani, 2018). In an all-digital world, lifestyle is also very dependent on digital devices. Human interaction is full of virtual interactions as compared to real interactions. It also increases the possibility of immersing oneself in one's own world. The term distraction appears in connection with the phenomenon of people's behavior who divert their time for a moment to focus on their own world, so the term distraction appears. In fact, this term is commonly used in the fields of medicine and health. Meanwhile, in the Collins English Dictionary, distraction is something that serves as an exception or entertainment. The distraction that creates the greatest convenience is the transfer of the center of gravity to the device. Every time we are filled with a lot of information, we are even overloaded. While we receive useful information, there is also a lot of incorrect information.

The development of digital technology also impacts teaching methods. Two things that can be observed are the emergence of new concepts in the delivery of learning materials, for example, blended learning and flipped classrooms (Prayitno & Masduki, 2017; Yanah et al., 2018) and increasingly sophisticated learning tools/media such as virtual reality and learning tools. high- performance internet (Sunarni & Budiarto, 2014).

Learning has also undergone a major revolution. Starting from learning in large classes to personal learning (personal approach). The learning process no longer occurs in real learning but occurs with the help of cloud computing in virtual big data classes. Because learning occurs virtually, this process is carried out using distance learning methods. The learning paradigm of the 5.0 era is personalized, big capacity computerization, and distance learning. This new learning paradigm has consequences for educational actors in responding to these changes; therefore, up-to-date learning facilities and infrastructure, including hardware, software and staff.

Learning Transformation from Pedagogy to Heutagogy

In general terminology, pedagogy refers to adult education. Adults learn independently by determining their goals, strategies, and learning resources. Adults already have experience, knowledge, skills, and abilities to face life (Sujarwo, 2017). They learn consciously because they need it according to their interests.

Society 5.0 also triggers a new education paradigm, Education 5.0, which gives birth to a new term, heutagogy. In other words, heutagogy is referred to as self-determined learning (Blaschke, 2012), where learning is seen as a process determined purely by the learner. In contrast to andragogy, there is still a role between teachers and students or between participants and trainers. With heutagogy, roles merge as two or more learning partners become co-learners. The parties receive information and learn from each other. The role of the teacher/facilitator is not limited to providing information, but her role is more than that, namely lifelong learners, learning leaders, learning resource managers, network building leaders, network diversity leaders, and communication openers (Karaferye, 2018). In essence, both are equal learners.

In the current education system, the aim remains to provide resources in line with the current socioeconomic model. The teacher is at the center of learning, followed by the structure of the program and students trying to adapt to the goals given. In the future, the nature of work will change rapidly; there will be jobs that will grow and there will be types of jobs that will disappear. This can make education systems and employment policies obsolete. This situation leads to the need for a workforce that can adapt quickly, wants to keep learning, anticipates change, and adapts to a complex work environment (Karaferye, 2018). Therefore, students are lifelong learners, continuously learning actively and applying their learning experiences, which requires a teacher who is more than just an information giver. In the heutagogy concept, the teacher's role as principal and tutor is minimized because students have full autonomy to organize themselves so that they become active and proactive learners in the learning process. This independence includes the selection of important learning strategies to learn and become a source of learning. This approach challenges ways of thinking about "teaching and learning" and encourages teachers to think more about the process than about the content. Allows students to understand their world better than their teachers. It forces the teacher to enter the student's world and allows the teacher to transcend existing disciplines and theories. Heutagogy makes students truly responsible for what they learn and when they learn, and provides a framework for learning that places adults in charge of progress (Handayani, 2015). Heutagogy learning planning consists of 3 stages: (1) students and teachers work together to identify learning needs and outcomes and then agree on them in a contract agreement; (2) during the learning process, the teacher makes difficult tasks to be completed either independently or with assistance; and (3) learning is assessed against agreed outcomes to determine whether those outcomes have been achieved (Booth et al., 2016).

Transformation of learning toward independent learning is natural. In this era, many things supported the creation of an independent learning atmosphere as a feature of heutagogy. Rapid change also requires rapid upgrading of teacher skills. There are many learning media, ranging from simple media to hypermedia. Online learning platforms are also increasingly being used as effective learning alternatives. It is time for teacher training to adapt to this reality. The strictness of the teacher's professional duties in the teaching and learning process and the management of learning is the reason for the need for teacher independence in developing their own competencies, for example, systematic, structured and heutagogical education.

Implementation Step

The revised 2013 curriculum anticipates and addresses the above issues. This is taught in the 2013–2018 curriculum training. The new edition of the 2013 curriculum has three focuses: Strengthening personality education, 21st-century skills, and literacy in all areas of learning (Kemendikbud, 2017). Implementing modern teacher education that raises teachers' awareness of their obligation to lifelong learning requires special resources.

The following are ideas for implementing the heutagogy approach in teacher education in the coming years:

- 1) The improvement of higher-order thinking Skills (HOTS) in learning should be continuously pursued so that students can develop critical, collaborative, creative, and communicative thinking skills needed in this era. Learning methods that prioritize logical thinking rather than mere memorization should be a priority. The rapid development of digital technology also demands quick response and adaptation. Self-knowledge updates should be continuously done by the speed of technology usage. Teachers can learn anytime with flexible programs. This is driven by the desire and need to bridge the gap between the skills that have been mastered with the ideal needs currently required by continuously learning application materials based on HOTS. In the coming years, this material should be enriched with practical experiences from those who have integrated HOTS into learning, so that the material is not just theoretical. HOTS-based learning models may have variations from year to year, but their essence remains the same. The implementation of activity-based and project-based learning models becomes increasingly challenging for teachers and students. In other words, the learning opportunities to improve independent performance from various unlimited sources become greater.
- 2) Enhancing digital competencies. Digital competencies (ICT) correlate with teacher effectiveness. However, according to some reports, teachers' digital competencies are still low. Therefore, an unlimited digital literacy program is needed, not only limited to learning MS Word and MS Excel but also necessary things, such as access to learning portals (learning management systems); searching for valid learning sources using various file formats; and posting and sharing ideas. By improving digital literacy, it will make teachers' lives easier in the era of self-directed learning (heutagogy).
- 3) Development of a comprehensive and reliable teaching platform. Learning Management Systems (LMS) guide students through the appropriate learning paths. Learning materials are presented comprehensively and should be by the needs of teachers (teacher qualification standards) and actual student needs. This learning platform tracks all teacher activities, learning progress, achieved grades, minimum learning resources, and more. The role of mentors, who become teacher learning partners, is minimal. Facilitators have a role almost similar to teachers participating in training, which is to learn the material according to their needs so that with this model, a wide network of teacher learners is formed. To meet the demands of digital learning systems in the future, it is not enough to just present a learning portal; a platform is needed. A learning platform that meets the needs of teacher learning must be implemented and available. Teacher learners, mentors, modern learning resources (based on animation, video, and infographics), as well as records of all learning activities within the ecosystem are presented on this platform. This platform also facilitates the implementation of self-directed learning, so that teachers' free time can be filled with learning through devices.
- 4) Widespread implementation of teacher education with a pedagogical approach. After the above three steps are completed, heutagogy teacher training can be conducted. Recorded information about the teacher's previous performance (qualifications, materials taught, etc.) can be used as a starting point for further recording so that the training does not start from scratch. This is also a government commitment to professional development as a program to enhance teacher competence.

CONCLUSION

In the era of society 5.0, teachers face big challenges. At that time, there were many rapid changes in all fields, including education. The teacher must react to and adapt to changes. The big challenge for teachers is to provide interesting learning for the millennial generation, who are also digital natives. This challenge must be faced by teachers who are always learning to master 21st century skills so that their existence is in harmony with the conditions of students and the current situation. The next challenge is to adapt to the development of

learning problems related to behavior, methods, and learning processes. The aim of all of this is to prepare teachers who not only impart knowledge but also guide learning resources, network, and communicate openly as lifelong learners.

Up-to-date training is needed to keep teacher competencies up-to-date in order to face the challenges of the 5.0 era. A teacher training program based on a heutagogy approach is an idea that could be considered. The resulting learning method is inseparable from the teacher's experience in previous teacher programs. Heutagogy is an interesting approach because it is more flexible, in line with technological developments, and the teacher as a student has great decision-making power about what and how to learn, with minimal guidance from an (autonomous) teacher/mentor.

With the heutagogy approach in the delivery of teacher training, increased learning with the HOTS application must be considered. The aim is to improve students' thinking skills, strengthen digital literacy to broaden teachers' horizons, immerse themselves in the world of the millennial generation, and develop a complete and reliable teaching platform as a "virtual classroom". Meanwhile, the learning system and implementation of teacher education are part of the government's commitment to continuous professional development using modern methods.

To implement the idea of heutagogy education in accordance with the prevailing conditions, more extensive research is needed. The training must have a positive effect on increasing teacher competence and improving the quality of student learning. Education should also create awareness of lifelong learning to improve skills, not compulsory learning.

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