

Implications of Intrinsic Motivation and Mindset on Learning

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Abstract

This study looks at the Implications of intrinsic motivation and mindset on the learning process. Intrinsic motivation refers to doing something for the sake of intrinsic satisfaction and personal interest rather than for external rewards. Mindset, on the other hand, refers to a person's beliefs about intelligence, abilities, and the malleability. The study looks into the connection between intrinsic motivation, mindset, and learning. Learners develop intrinsic motivation as a result of a growth mindset. The study insights into how intrinsic motivation and mindset influence learning outcomes and educational experiences through a review of relevant literature. These factors' impacts on student engagement, self-efficacy, and successful learning strategies are examined. The findings highlight the significance of developing intrinsic motivation and a growth mindset in order to maximise the learning process and support academic achievement.

Keywords: Intrinsic Motivation, Mindset, Academic Achievement, Student Engagement, Self-Efficacy, Effective Learning Strategies, Educational Psychology, Growth-Oriented Mindset

1. Introduction:

Intrinsic motivation and mindset are two significant factors that have attracted attention in the field of educational psychology due to their implications for learning outcomes and academic achievement (Bedford, 2017; Xu et al., 2021). Intrinsic motivation relates to engaging in an activity for its inherent satisfaction and personal interest, whereas mindset refers to an individual's beliefs about intelligence, abilities, and their malleability. The interaction between intrinsic motivation and mindset in the learning process has major consequences for student engagement, self-efficacy, successful learning, and the formation of a supportive learning environment (Ng, 2018; Sochan, 2012).

Understanding the impact of intrinsic motivation and mindset in learning is critical for fostering positive educational results. Intrinsic motivation helps students to participate in learning activities that are motivated by curiosity, competence, and autonomy rather than just by external rewards or pressures. Students that are intrinsically motivated are more likely to actively engage in their learning, seek challenges, and persevere in the face of difficulty. This motivation is connected to higher academic achievement because it develops a strong sense of excitement and dedication to the learning process (Barron & Harackiewicz, 2000; Elliot & Harackiewicz, 1996a, 1996b; Rawsthorne & Elliot, 1999).

The distinction between a growth-oriented mindset and a fixed mindset, in particular, has significant implications for learning. People who have a growth mindset believe that intelligence and abilities can be developed via hard work, successful strategies, and feedback. They perceive obstacles as chances for growth, see effort as a means to mastery, and show resilience when confronted with setbacks. Individuals with a fixed mindset, on the other hand,

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feel that intelligence and abilities are fixed attributes that cannot be considerably enhanced. Throughout lifelong learning, the growth mindset maintains intrinsic motivation, whereas the fixed mindset employs extrinsic drive. Effective learning strategies, such as goal planning and metacognitive skills, can help students become independent learners and increase their intrinsic motivation. Dweck (2017) demonstrated that mindset is closely related to motivation theories. Although Wigfield and Wagner (2007) added that the relationship between motivation and academic achievement has been considered one-directional, with motivation influencing academic achievement, Deci et al. (2001) and Dweck & Master (2009) have posited that motivation and achievement have a reciprocal relationship, whereby academic successes and failures impact motivation and motivation in turn impacts achievement (Saunders, 2013). Fixed mindsets can impede learning and academic performances by reducing people's willingness to take chances, accept challenges, and persevere in the face of adversity.

In the learning process, the combination of intrinsic motivation with a growth mindset creates a powerful synergy (Bieg et al., 2011; Ng, 2018). Students who are intrinsically motivated and believe in their ability to progress are more likely to engage in effective learning strategies, set challenging goals, and work hard to overcome obstacles. This combination promotes self-efficacy, or belief in one's own ability to succeed, which improves learning outcomes and academic accomplishment (Deci & Ryan, 1985; Di Domenico & Ryan, 2017; Miller et al., 1988).

Furthermore, cultivating intrinsic motivation and creating a growth-oriented attitude requires the establishment of a helpful learning environment. Giving students opportunity for autonomy, mastery, and relatedness is part of creating a supportive learning environment. Autonomy gives students a sense of control and ownership over their learning, while mastery implies presenting challenging tasks and opportunities for skill development, and relatedness highlighted the role of positive and meaningful relationships between students and teachers, as well as among peers. A positive classroom environment enables students to take risks, seek feedback, cooperate with others, and cultivate a growth attitude (Golightly, 2021; Huang et al., 2019; Müller & Louw, 2004; Velayutham et al., 2013; Zher Huey & Hussain, 2010).

The objective of this study is to investigate the effects of intrinsic motivation and mindset on the learning process. It investigates the link between these variables and academic achievement, student engagement, self-efficacy, and effective learning strategies. Educators and stakeholders may develop instructional approaches and supportive learning environments that enhance student learning experiences and nurture academic achievement by understanding the relationship between intrinsic motivation, mindset, and learning. The paper finishes with ideas for incorporating intrinsic motivation and mindset principles into educational methods in order to enhance good learning outcomes and foster students' holistic development.

2. *Mindset and intrinsic motivation:*

Deci and Ryan (1985) discovered that intrinsic motivation is increased when people regard their abilities as changeable and subject to improvement, which corresponds to the concept of a growth mindset. Dweck and Leggett (1988) conducted study that found a link between

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mindset and intrinsic motivation, implying that those who have a growth mindset are more likely to have higher levels of intrinsic motivation. They discovered that people with a growth mindset were more likely to be motivated by intrinsic factors. Individuals with a growth mindset were found to have higher levels of intrinsic motivation in a study conducted by Ryan and Deci (2000). They went on to say that intrinsic motivation, or engaging in an activity for the sake of enjoyment and personal fulfilment, is positively connected with a growth mindset. Students with a growth mindset have higher levels of intrinsic motivation than those with a fixed mindset, according to Blackwell, Trzesniewski, and Dweck (2007). According to the findings of Haimovitz and Dweck (2016), students who have a growth mindset had higher intrinsic motivation for academic work.

Intrinsic motivation and growth mindset:

Deci, Vallerand, Pelletier, and Ryan (1991) discovered that intrinsic motivation is positively associated to the belief in personal progress and improvement, which is consistent with the concept of a growth mindset. Dweck (2000) discovered that those with a growth mindset have higher levels of intrinsic motivation. Grant and Dweck (2003) discovered that people with a growth mindset are more likely to have a strong sense of intrinsic motivation. According to Blackwell, Trzesniewski, and Dweck (2007), students with a growth mindset have higher levels of intrinsic motivation than those with a fixed mindset. They discovered that pupils with a growth mentality have higher levels of intrinsic motivation than those with a fixed mindset. According to Dweck (2012), a growth mindset is related with intrinsic motivation and a desire to learn. Yeager and Dweck (2012) discovered that students with a growth mindset were more likely to have higher levels of intrinsic motivation and a passion for learning in their study. According to Haimovitz and Dweck (2016), students with a growth mindset have higher intrinsic motivation for academic work. According to Haimovitz and Dweck (2016), students that have a growth mindset have more intrinsic drive to complete academic objectives.

Intrinsic motivation and fixed mindset:

Individuals with a fixed mindset, according to Dweck and Leggett (1988), have a lower tendency toward intrinsic motivation. Mueller and Dweck (1998) found that people with a fixed mindset had lower levels of intrinsic motivation due to their fear of failure. Mueller and Dweck (1998) observed that people with a fixed mindset have lower levels of intrinsic motivation and may avoid difficult tasks to protect their self-image. Individuals with a fixed mindset are less likely to display high levels of intrinsic motivation, according to Dweck (2000); the study indicated that individuals with a fixed mindset were more likely to exhibit lower levels of intrinsic motivation. Furthermore, Dweck and Molden (2005) stated that a fixed worldview is related with a decreased sense of identity. Persons with a fixed mindset, according to Dweck (2000), are less likely to display high levels of intrinsic motivation; the study found that individuals with a fixed mindset were more likely to exhibit lower levels of intrinsic motivation. Furthermore, Dweck and Molden (2005) found that a fixed mindset is connected with a lower sense of intrinsic motivation and a lower willingness to engage in difficult tasks.

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According to Blackwell, Trzesniewski, and Dweck (2007) research, students with a fixed mindset have lower levels of intrinsic motivation than those with a growth mindset. They discovered that students with a fixed perspective have lower levels of intrinsic motivation than those with a growth mindset. Burnette, O'Boyle, VanEpps, Pollack, and Finkel (2013) discovered that those with a fixed mindset had lower intrinsic drive and enjoyment in their jobs. They discovered that people with a fixed attitude were less likely to have intrinsic motivation and were more likely to rely on external rewards.

3. *Intrinsic Motivation and Learning:*

The concept of intrinsic motivation, as well as its characteristics, are vital in the learning process. It investigates the intrinsic satisfaction and personal interest associated with activities driven by curiosity, competence, and autonomy. Previous research has indicated that intrinsic motivation has a positive impact on student engagement and academic attainment (Jovanovic & Matejevic, 2014; Katsuhisa & Masahide, 2009; Kim, 2020). According to the findings of the study, intrinsic drive is critical in generating deep and meaningful learning (Miller, 2008). Intrinsic motivation is a powerful force that drives students to actively seek out new information and take charge of their learning process. When students are intrinsically motivated, it is because they enjoy learning, are curious, and want to explore and understand new concepts. This sort of motivation is distinct from external rewards or constraints, and it has a significant impact on student engagement, effective learning strategies, and academic achievement (Barron & Harackiewicz, 2000; Elliot & Harackiewicz, 1996b).

Engaging in learning activities that are motivated by intrinsic motivation increases student engagement. Students become active learners, seeking out new material, asking questions, and taking charge of their educational experience. They are more likely to show real interest in the material, participate in conversations, and willingly spend time and effort into learning tasks (Carreira, 2011; Javed et al., 2022; Kim, 2020; Peuliauskien, 2020). This increased engagement not only improves the quality of the learning experience, but it also promotes improved information retention and deeper comprehension of the content.

The implementation of successful learning strategies is also influenced by intrinsic motivation. When students are intrinsically driven, they are more likely to use deep learning strategies such as elaboration, critical thinking, and problem solving. They use active learning strategies, look for additional resources, and draw connections between new material and past knowledge (Jovanovic & Matejevic, 2014; Katsuhisa & Masahide, 2009; Kim, 2020; Sengodan & Iksan, 2012). Students that embrace intrinsic motivation become active participants in their learning process, constantly seeking opportunities for development and progress.

Furthermore, intrinsic motivation improves academic performance. Students that are intrinsically motivated are more likely to persevere in the face of obstacles and disappointments. They are more persistent and resilient, considering setbacks as learning opportunities rather than hurdles to success (Barron & Harackiewicz, 2000; Elliot & Harackiewicz, 1996b; Rawsthorne & Elliot, 1999). This persistence correlates to greater academic performance because children are more eager to put up the work required to

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overcome problems and understand complex subjects. Furthermore, intrinsic motivation promotes a sense of happiness and fulfilment in the learning process, which leads to improved satisfaction and higher levels of total academic achievement.

It is crucial to enabling optimal learning outcomes by creating an atmosphere that fosters intrinsic desire. Teachers can help students develop intrinsic motivation by giving them choices and autonomy in their learning, allowing them to pursue topics of personal interest, and aligning learning experiences with their individual passions (Fretz, 2021; Huang et al., 2019; Müller & Louw, 2004; Velayutham et al., 2013). Moreover, teachers can stress the relevance and real-world applications of the subject being taught, relating it to the lives and goals of their students (Sökmen, 2021; Zher Huey & Hussain, 2010). Educators may develop a good and rewarding learning environment that motivates students to become lifelong learners by identifying and valuing students' intrinsic motivation.

Intrinsic motivation influences student engagement, effective learning strategies, and academic achievement during the learning process. Educators may establish a learning atmosphere that encourages active engagement, resilience, and a real love of learning by cultivating intrinsic motivation. Recognizing the importance of intrinsic motivation in educational contexts enables teachers to create instructional approaches and foster a classroom culture that promotes students' intrinsic motivation, resulting in improved learning experiences and academic outcomes.

4. *Mindset and Learning:*

The theoretical foundations of mindset are discussed, with a focus on the difference between growth mindset and fixed mindset. The impact of mindset on learning is investigated, revealing how people's beliefs about their intelligence and talents can shape how they handle challenges, effort, and resilience. Motivation, according to Bandura (1986), is critical in skill development and habit formation because it determines the beginning, orientation, intensity, and persistence of activity. Gollwitzer (1999) emphasised the relevance of motivation in habit formation and maintenance, arguing that motivated people are more likely to engage in repeated actions, which leads to habit formation (Gollwitzer, 1999). Motivation is described as "the internal or external reasons that inspire someone to pursue a specific path of action" (Deci & Ryan, 2000). According to Dweck's (2006) research on mindset, those with a growth mindset are more inclined to accept difficulties and persistence even in the face of setbacks.

Mindset has a significant impact on learning results. Students who have a growth mindset are more likely to set difficult goals, actively seek out learning opportunities, and persevere in the face of failures. They have more self-efficacy, believing in their abilities to change and succeed. This mindset promotes the use of good learning tactics such as seeking assistance when necessary, using feedback to guide growth, and employing effective study approaches (Bedford, 2017; Cooley & Larson, 2018; Hanson et al., 2016; Havard, 2007; Hildrew, 2020). As a result, kids with a growth mindset achieve greater levels of academic accomplishment and participate in more in-depth and meaningful learning experiences.

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The influence of mindset on learning outcomes is significant. Students who have a growth mindset are more likely to establish challenging goals, actively seek out learning opportunities, and persist in the face of failures. They have a higher feeling of self-efficacy, believing in their abilities to change and succeed. This mindset promotes the use of good learning strategies such as seeking help when needed, using feedback to guide growth, and employing effective study approaches (Bedford, 2017; Cooley & Larson, 2018; Hanson et al., 2016; Havard, 2007; Hildrew, 2020). As a result, students with a growth mindset achieve better levels of academic achievement and engage in deeper and more meaningful learning experiences. Lally, van Jaarsveld, Potts, and Wardle (2010) discovered that motivation is a critical role in forming and maintaining habits in the setting of habit development. Individuals that are highly motivated are more likely to participate in consistent and repetitive behaviours, which results in the creation of habits (Lally et al., 2010). Duhigg's (2012) research also stressed the importance of motivation in habit formation. Motivation is the initial trigger that prompts someone to continue an activity until it becomes automatic and habitual.

Integrating mindset theories into educational environments has the ability to modify student learning. Educators can promote a growth mindset by encouraging students to believe that intelligence and abilities are changeable and can be developed through hard work and successful strategies. This can be accomplished by directly teaching students about mindset and offering opportunities for reflection and self-evaluation. It is critical to cultivate a growth mindset in the classroom by creating a secure and supportive environment that fosters risk-taking, rewards, effort, and provides constructive feedback (Bedford, 2017; Cooley & Larson, 2018; Havard, 2007; Suanthong, 2023). Furthermore, rather than focusing solely on outcomes, educators might stress the process of learning. Educators can shift students' focus from performance goals to mastery goals by emphasising the importance of effort, patience, and learning from failures. This fosters a growth mindset in students, who enjoy the learning process and are motivated by the intrinsic satisfaction of gaining knowledge and skills.

Mindset is critical to learning outcomes and academic achievement. A growth mindset promotes motivation, resilience, and the application of appropriate learning strategies, all of which contribute to better learning experiences and academic success. Educators can foster a growth mindset by encouraging students to believe in the malleability of intelligence and abilities, fostering a supportive learning environment, and emphasising the importance of effort and the learning process. Educators may enable students to create a mindset that fosters lifetime learning and lays the groundwork for continuing growth and achievement by incorporating mindset ideas into educational practise.

5. *The Interplay between Intrinsic Motivation and Mindset:*

Intrinsic motivation and mindset are important factors that influence student engagement, persistence, and overall success in the world of learning and achievement. These two factors are inextricably linked and interact dynamically, defining the learning experience and outcomes.

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Individuals with a growth mindset are more likely to exhibit intrinsic motivation in their learning activities, according to Dweck (2006) and Lee et al., (2019). Intrinsic motivation, according to Ryan and Deci (2000) and Blackwell et al. (2007), can impact the formation of a growth mindset by boosting individuals' belief in their capacity for growth and improvement. A growth mindset, on the other hand, increases intrinsic motivation by fostering a sense of purpose, self-efficacy, and love for learning" (Haimovitz & Dweck, 2016; Yeager et al., 2019).

The interaction between intrinsic motivation and mindset is mutually reinforcing. Students that are naturally driven are more likely to develop a growth mindset. The pleasure and satisfaction obtained from the learning process foster a belief in one's own capacity for growth and improvement (Havard, 2007). A growth mindset, in turn, increases intrinsic motivation by promoting a sense of purpose, self-efficacy, and a willingness to take on challenges. Students with a growth mindset are more likely to seek out intrinsically rewarding learning opportunities and persevere in their efforts, especially when faced with challenges (Pueschel & Tucker, 2018).

Mindset, on the other hand, can influence intrinsic motivation. Students that have a growth mindset respect effort and see it as an essential part of the learning process. They recognise that hard work and effective strategies can help them grow their abilities, resulting in greater feeling of intrinsic motivation (Metcalf, 2021; Seaton, 2018). Students with a fixed mindset, on the other hand, may be more prone to relying on external rewards or pressures to stimulate their learning, as they may assume that their abilities are fixed and not subject to change (Luo, 2021; Ridley, 2016; Seaton, 2018).

Understanding the interaction between intrinsic motivation and mindset is crucial for educators and stakeholders who want to create optimal learning environments (Ames, 1992; Bostwick et al., 2020; Lazarides & Rubach, 2017). Educators can build a beneficial connection that improves student engagement, persistence, and learning outcomes by cultivating intrinsic motivation and developing a growth mindset. Strategies such as providing choice and autonomy, providing hard and relevant learning tasks, and building a supportive and encouraging classroom climate can all help to create intrinsic motivation as well as a growth mindset (Ames & Archer, 1988a, 1988b; Kaur & Awang Hashim, 2016; Schraw et al., 1995; Vassiou et al., 2016).

Intrinsic motivation and mindset are linked aspects that influence the learning process. Intrinsic motivation drives the desire to engage in learning activities for the purpose of learning, whereas mindset shapes people's ideas about their intelligence and growth potential. This interaction is reciprocal, with intrinsic motivation fostering a growth mindset and a growth mindset improving intrinsic motivation. Educators may create an environment that increases student engagement, resilience, and eventually leads to improved learning outcomes by identifying and encouraging this interplay.

6. *Implications for Educational Practice:*

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It is discussed the consequences of intrinsic motivation and mindset in classroom practices. Understanding the interaction between intrinsic motivation and mindset has significant consequences for teaching process. Educators may build a learning environment that encourages student engagement, motivation, and academic success by adopting strategies and approaches that foster both intrinsic drive and a growth mindset.

Fostering Intrinsic Motivation: Educators should create learning situations that capitalise on students' intrinsic motivation. This can be accomplished through infusing real-world applicability and actual problem-solving possibilities into learning assignments, as well as fostering student research and curiosity (Bieg et al., 2011; Elliot & Harackiewicz, 1996a, 1996b; Rawsthorne & Elliot, 1999). Educators can increase intrinsic motivation and generate a sense of ownership and satisfaction in the learning process by aligning instructional activities with students' interests and passions.

Promoting a Growth Mindset: In the classroom, teachers can clearly teach and foster a growth mindset. This entails teaching students that intelligence and abilities can be developed via hard work and successful tactics (Dweck, 2017; Limeri et al., 2020; Rohne, 2015; Wang et al., 2021). Educators can give explicit feedback emphasising effort, progress, and the importance of learning from failures. Creating a classroom atmosphere that prioritises growth and improvement over performance and encourages students to take on challenges can help students develop a growth mindset.

Emphasizing Effort and Process: Instead, focusing simply on outcomes or grades, educators should emphasise the importance of effort and the learning process. Teachers can assist children develop a positive work ethic and a belief in the power of hard work by emphasising the value of effort, persistence, and resilience (Abuhassan & Bates, 2015; Glerum et al., 2020; Le & Wolfe, 2013; Rautiainen et al., 2017). Students might be motivated to continue their learning journey by celebrating their progress and recognising the gradual steps towards mastery.

Teaching Effective Learning Strategies: Educators can focus on teaching effective learning strategies and metacognitive abilities to learners. Educators empower students to take control of their learning process and become independent learners by providing them with strategies such as goal setting, self-monitoring, self-regulation, and reflection (Ames & Archer, 1988a, 1988b; Aslan & Aktaş, 2020; Dupeyrat & Marin, 2001). Teaching students how to plan, organise, and manage their time effectively can also improve their capacity to participate in deep and meaningful learning.

Creating a Supportive Learning Environment: A supportive and inclusive classroom environment is essential for fostering intrinsic motivation as well as a growth mindset. Educators should provide a nonjudgmental environment in which students feel safe taking risks, asking questions, and expressing their thoughts and opinions (Fretz, 2021; Sökmen, 2021; Tas, 2016; Zher Huey & Hussain, 2010). Building meaningful relationships with students and cultivating a sense of belonging can boost their motivation and involvement in the learning process.

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Providing Feedback and Encouragement: Educators should give students timely and constructive feedback that emphasises effort, progress, and specific areas for development. Feedback should be encouraging and suited to specific student requirements, encouraging a growth mindset and providing direction for future development. Encouragement and appreciation of students' hard work and dedication can boost intrinsic motivation and create a positive learning environment (Ashford & De Stobbeleir, 2013; Carless et al., 2011; Senko & Harackiewicz, 2005; Zher Huey & Hussain, 2010).

Incorporating these findings into classroom practices has the potential to increase student engagement, motivation, and academic achievement. Educators may empower students to become active participants in their own learning, foster a love of learning, and cultivate the required skills and attitudes for lifelong success through cultivating intrinsic motivation and developing a growth mindset.

7. Conclusion:

The effects of intrinsic motivation and mindset on learning outcomes and academic achievement are important. Promoting student engagement, persistence, and the development of successful learning strategies requires cultivating intrinsic motivation and building a growth-oriented mindset. The findings highlight the significance of having a supportive learning environment that fosters intrinsic motivation and growth mindset. Educators play a vital role in cultivating these factors in order to maximise the learning process and boost academic success.

The interaction of intrinsic motivation and mindset has major implications for learning, academic achievement, student engagement, and the development of effective learning strategies. According to the research, intrinsic motivation, which is driven by personal interest, curiosity, and the inherent satisfaction obtained from the learning process, is essential in boosting student engagement, perseverance, and success.

Furthermore, mindset, particularly a growth-oriented mindset, determines how people approach problems, perceive effort, and react to failures. A growth mindset, defined by the concept that intelligence and talents can be enhanced by hard work and effective strategies, develops resilience, a willingness to face challenges, and a dedication to continuous learning and improvement.

In classroom practices, intrinsic motivation and mindset have significant implications. By giving choice, relevance, and opportunity for exploration, educators can create learning experiences that tap into students' innate desire. They can teach and foster a growth-oriented mindset directly by emphasising effort, progress, and the importance of learning from failures. Educators can provide a supportive learning environment that emphasizes development and progress above performance, promotes student involvement, and boosts self-efficacy.

Furthermore, using effective learning strategies such as goal setting, self-regulation, and metacognitive skills can empower students to take control of their learning process and become self-directed learners. This, in turn, leads to higher academic achievement, deeper engagement,

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and the development of abilities for lifelong learning. The consequences of intrinsic motivation and mindset extend beyond the classroom. The relevance of cultivating a growth-oriented mindset and intrinsic motivation for lifelong learning, personal development, and professional success is highlighted in this study.

In learning, the interaction between intrinsic drive and mindset is a dynamic and influential factor. Understanding and implementing the power of intrinsic motivation and a growth mindset can have a significant impact on student participation, academic achievement, and the development of effective learning strategies. Educators may build a supportive and empowered learning environment that promotes a love of learning, resilience, and the quest of continual development and progress by implementing these ideas into their teaching process.

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