



Primary School Teachers' Views on the Learning Motivation of Gifted Students

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Abstract

The study aims to identify the internal and external factors that influence the learning motivation of gifted students from primary school teachers' points of view. The study was conducted between February 2023 and September 2024 and involved 70 ($n = 70$) primary school teachers. The study addresses two research questions: RQ1: What internal factors enhance the learning motivation of gifted students from primary school teachers' points of view? RQ2: What external factors influence the learning motivation of gifted students from primary school teachers' points of view? The study was conducted based on a qualitative research design to achieve the aim of the study and answer the research questions. The collected data were analysed using content analysis consisting of three stages - open coding, axial coding, and selective coding. The study revealed that curiosity, achievement, and enjoying the experience are internal factors affecting gifted students' motivation to learn. Curiosity is mainly driven by interest, and achievements depend on goal setting and participation in various activities, but environment, engagement, and autonomy are significant for enjoying the experience. The main external factors influencing learning motivation are recognition and support. Primary school teachers believe gifted students can be motivated to learn through praise and that teachers and parents can support them more effectively. The study develops a learning motivation model to identify the factors and sub-factors influencing gifted students' learning motivation. The findings help primary school teachers to identify the internal and external factors affecting the learning motivation of gifted students.

Keywords: gifted students, learning motivation, primary school teachers, primary school students, school education

1. Introduction

Today's society needs and cares about all people, including those outside the standard roles defined by the education system. Because of that, it is essential to provide all people with appropriate education according to their ability. For example, gifted students can likely achieve more and do better than their peers. These students can become future leaders and innovators, help solve global problems and inspire others, contribute to the economy and enrich our culture. The stage of primary education is extra special in every

student's life, and primary school teachers should help students feel safe and motivated. Motivation is a key factor in fostering student engagement in learning activities. It acts as a dominant mechanism for regulating the behaviour of gifted students. Hornstra and colleagues (Hornstra et al., 2023) acknowledge that gifted students in primary school may be at risk of developing negative motivation, as mainstream schools may struggle to provide an optimally challenging learning environment. Reis-Jorge and colleagues (Reis-Jorge et al., 2021), studying primary school teachers' perceptions of giftedness and their experience working with gifted children, also conclude that one of the challenges in the work of primary school teachers is the difficulty of maintaining gifted students' motivation to learn.

Therefore, it is significant for a primary school teacher to understand what internal and external factors contribute to gifted students' motivation to learn in primary school. Because of that, **the study aims** to identify the internal and external factors that influence the learning motivation of gifted students from primary school teachers' points of view. This study also compares primary school teachers' views on the external and internal factors affecting gifted students' learning motivation with previous studies conducted by other researchers.

2. Theoretical Background

A gifted student is an individual who can perform better than their peers (Worrell et al., 2019) and who demonstrates exceptional abilities in one or more areas (Abramo & Natale-Abramo, 2020). Nowadays, there is no common understanding of what giftedness is. The perception of giftedness is based on theoretical models developed over several decades. Research revealed that giftedness can manifest itself in various areas and can be defined as an outstanding ability in any sector (Gardner, 1983), and at the same time, it is a mixture of intellectual ability, creativity and motivation (Renzulli, 2011), it has an innate potential that can be developed into talent (Gagné, 2004) and requires appropriate support and environment (Mönks, 1992).

Gifted students differ from their peers in terms of learning depth, speed of perception, and interests (Sahin & Levent, 2015), in the processes of intellectual, social-emotional and physical development (Ogurlu et al., 2018), and they have different learning style characterized by active metacognitive thinking and learning (Alelyani, 2021). Gifted students have special educational and socio-emotional needs (Kaya & Islekeller-Bozca, 2022), they use more self-regulated learning strategies than their peers in terms of organization, metacognition, time, and learning environment (Paz-Baruch & Hazema, 2023), they possess different and unique characteristics that require a flexible educational process (Tanik & Büyük, 2021). Although gifted students have some differences compared to their peers, they are generally well-adapted and satisfied with life (Bergold et al., 2020).

Researchers believe gifted students thrive in situations that require challenging (Patrick et al., 2015) and may be more sensitive to sensory cues but are not necessarily more empathetic or emotionally responsive than their peers (Samsen-Bronsveld et al., 2024). Moreover, a study conducted by Infantes-Paniagua and colleagues (Infantes-Paniagua

et al., 2022) found no differences in behavioural and emotional aspects between gifted students and their peers.

For gifted students, being motivated is essential to realize their potential. Researchers believe that most gifted students enjoy learning (Abdul Aziz et al., 2021), they are interested in exploring new things, they feel curious and want to achieve their goals (Barabwd et al., 2017), and they have different learning styles but are generally highly motivated to learn (Zubaedi et al., 2021). It means that such students are driven by internal motivation, which, according to Deci & Ryan (2000), can manifest itself in three ways and is related to satisfying human psychological needs. Researchers point out that internal motivation positively influences gifted students' creative performance (Kadyirov et al., 2024), academic achievement (Siegle & McCoach, 2005; Topçu & Leana-Taşçılar, 2018) and personality traits such as conscientiousness and openness to experience (Mammadov et al., 2018). However, gifted students' motivation to learn may be driven not only by internal factors but also encouraged by external factors. Deci and Ryan (Deci & Ryan, 2000) have determined that external motivation can take four forms, from external regulation to integrated motivation. Shumakova (Shumakova, 2021) believes that external motivation might have negative consequences for creativity and originality in adolescence when gifted students in primary education learn to meet parents' demands, and according to Siegle and McCoach (Siegle & McCoach, 2005), it is significant for teachers and parents to develop students' internal motivation, which arises from the student's interests, rather than external motivation, which determined by awards.

Gifted students may face various problems in their daily lives. Razak and colleagues (Razak et al., 2020) assumed that the three most common problems are perfectionism, social anxiety, and excessive irritability. Abdul Aziz and colleagues (Abdul Aziz et al., 2021) concluded that gifted students could struggle due to excessive perfectionism, impatience and intolerance, stigma, negative peer attitudes and difficulties in understanding others.

Teachers and parents play an essential role in facilitating the growth and success of gifted students. Teachers can support gifted students during the learning process. Graefe (Graefe, 2024) found that gifted students are most motivated to learn when teachers know how to teach, are content experts, and can manage the classroom to provide opportunities for all students to learn. Researchers also believe that teachers can support gifted students by identifying their strengths and communicating with adults to clarify their unique needs (Abramo & Natale-Abramo, 2020), informing them about what it means to be gifted, and what challenges are associated with developing self-confidence (Lindt et al., 2021), allowing them to be autonomous and using less control (Sypre et al., 2023). Meanwhile, parents also support gifted children's learning activities daily. Matthews and colleagues (Patri et al., 2023) point out that parents can use different strategies to motivate their gifted children. Some parents use external means, some focus on internal motivation, and others use a combination of both. A study revealed that the home environment provided by the parents can influence learning motivation (Garn et al., 2010). Gifted students spent much time studying at home during the Covid-19 pandemic. Studies have shown that for gifted students, compared to their peers, the pandemic restrictions had almost no impact on their motivation to learn (Samsen-Bronsveld et al., 2023), as students were able to overcome obstacles through self-regulated learning (Jurišević et al., 2024).

The gifted students are more motivated through tasks that are of optimal difficulty, authority that allows for choice and decision-making in the classroom, recognition that ensures improvement, a grouping that allows for learning with peers, an evaluation based on criteria, and time that is individually adjusted (Clinkenbeard, 2012). The motivation that focuses on completing a task is exposed by perseverance, endurance, hard work, and an exceptional passion for doing something (Renzulli, 2011). Researchers believe that gifted students' motivation to learn could be enhanced by integrating modern educational technologies into the learning process (Rudenko et al., 2021), personal communication with teachers (Graefe, 2024), setting learning goals, evaluation, and self-regulation strategies (Desmet & Pereira, 2022), active participation and collaboration (Lage- Gómez & Ros, 2023). A differentiated approach is suitable and productive for gifted students (Ismail et al., 2021), transdisciplinary integration and creativity (Lage-Gómez & Ros, 2023), as well as artificial intelligence tools that help meet the needs of gifted students (Siegle, 2023). Different internal and external factors can promote the motivation of gifted students to learn. This study is going to identify these factors.

3. Method

3.1 Participants

The study took place between February 2023 and September 2024 and involved 70 (n=70) primary school teachers who filled out the questionnaire at different times. The first group of respondents (n=27) completed the questionnaire on 18 February 2023, the second group of respondents (n=37) on 17 February 2024 and the third group of respondents (n=6) on 18 September 2024.

Based on the findings of Hennink and colleagues (Hennink et al., 2020), the study followed several ethical principles: (1) Confidentiality to ensure that the use of the collected data is only for the study; (2) Anonymity to protect the identity of respondents; (3) Informed consent to make respondents familiar with the procedure; (4) Voluntary, so that the participants involved in the study can withdraw from the study at any time.

3.2 Data Collections and Analysis

The study was based on a qualitative research design and created taking into account the sequence of content analysis stages determined by Bauer and Gaskell (Bauer & Gaskell, 2000): (1) Defining research questions; (2) Selecting data sources; (3) Data collection; (4) Creating a category system; (5) Data coding; (6) Data analysis; (7) Interpreting results. The study addresses two research questions: RQ1: What internal factors enhance the learning motivation of gifted students from primary school teachers' points of view? RQ2: What external factors influence the learning motivation of gifted students from primary school teachers' points of view? Using the Website Mentimeter.com allows the collection of participants' responses. Each respondent who participated in the study had to answer one question: What could motivate gifted students studying in grades 1-6 of primary education? There was an opportunity to provide one, two or three short answers to this question, which made it possible to summarise the respondents' answers in a word cloud and clearly perceive the most popular and widespread answers, and if respondents wanted, they could also comment on each answer in more detail.

The theoretical framework for the data category creation system was based on Deci and Ryan's (Deci & Ryan, 2000) findings on external and internal motivation. The data were coded using the three coding methods defined by Strauss and Corbin (Strauss & Corbin, 1990): (1) open

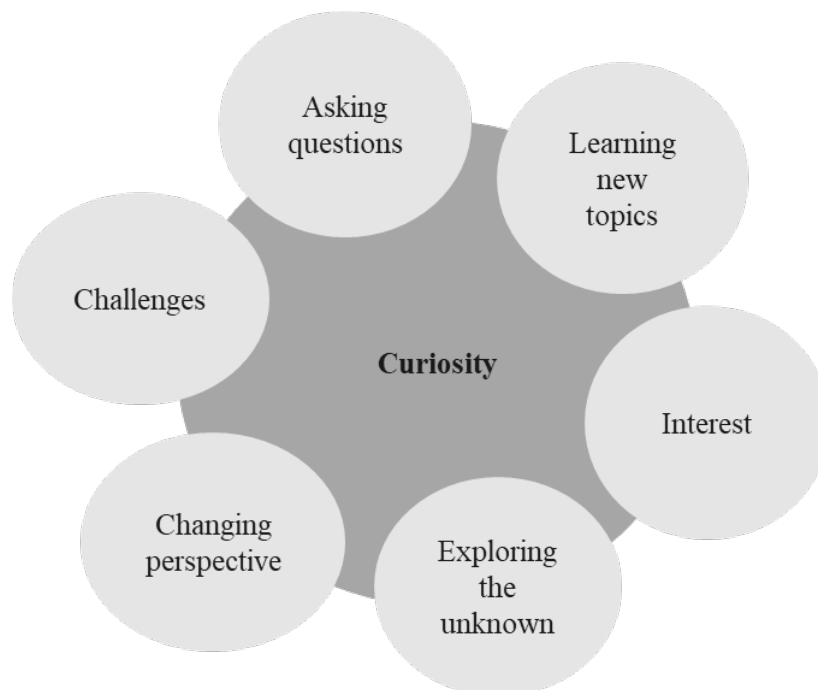
coding, (2) axial coding, and (3) selective coding. Open coding provided an opportunity to conduct initial analysis and identify categories to understand the key concepts used by primary school teachers to describe the factors that contribute to gifted students' motivation to learn. Using axial coding helps to find connections between the identified categories and sub-themes, which allows for a deeper understanding of the categories and their interrelationships. Selective coding conceptually connects the sub-themes identified in axial coding and, based on the identified themes, creates a theoretical framework for the learning motivation of gifted learning based on primary school teachers' views about the factors contributing to gifted primary school students' learning motivation.

Open, axial and selective coding of the data made it possible to analyse and compare them with Deci and Ryan's (2000) findings on extrinsic and intrinsic motivation, as well as to interpret the obtained results and obtain answers to the research questions.

4. Results

The study collected and analysed 172 (n=172) responses from 70 (n=70) participants. Primary school teachers believe that one of the factors affecting internal motivation is curiosity, which encourages gifted students to learn not because someone demands it from them but because they want to do that by themselves (Figure 1). Respondents acknowledge that gifted students' curiosity is related to interest (n=12), it encourages them to ask questions (n=2), seek new challenges and try new things (n=9), learn new and contemporary topics (n=5), and independently explore the unknown by searching for answers in books and other resources (n=2). If students are curious, they usually experiment, solve problems and create something new (n=7). As a result, they can change their perspective by looking at a situation, problem and things from a different point of view.

Figure 1. Sub-factors characterizing curiosity of gifted students



Source: own research

Another factor of internal motivation that determines why gifted students learn or do not learn is achievements (Figure 2). Achievements are concrete results or successes that the student attains by

reaching the set goal, so it is significant to set specific goals (n=10) that are following the perspectives of self-development, self-growth, self-realization, as well as further education and future. Respondents assume that maintaining the internal motivation of gifted students requires drawing up a plan in which big goals are divided into smaller goals. Primary school teachers are convinced that it is significant for gifted students to believe in their abilities and overcome obstacles, if any, as they progress towards achievement. Because of that, it would be better if students get the opportunity to participate, demonstrate their abilities and show good performance in different events (n=13) and can see their growth progress (n=10) in what they do. Competition (n=4) is also perhaps a strong foster of internal motivation that helps a gifted student achieve better results and develop their skills. Competition may provide an additional internal motivation to learn more and more effectively and achieve the goals set, but at the same time, it can lead to excessive stress and reduce the performance of gifted students. Achievements based on internal motivation are more sustainable and give gifted students greater satisfaction.

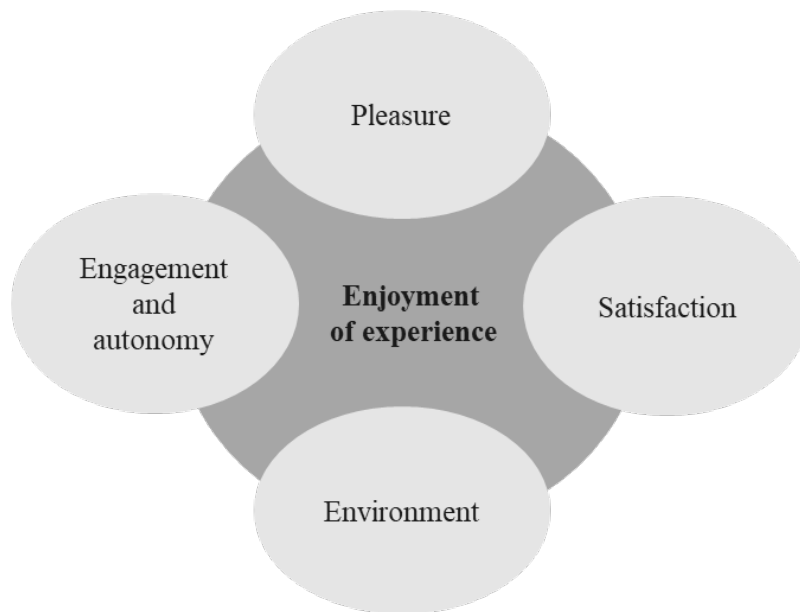
Figure 2. Sub-factors characterizing achievements of gifted students



Source: own research

The third factor that affects gifted student's internal motivation is the enjoyment of the experience (Figure 3). Respondents recognize that enjoyment of the experience could be influenced by internal motivation sub-factors such as engagement and autonomy (n=8), pleasure (n=7), satisfaction (n=6), and environment (n=11).

Figure 3. Sub-factors characterizing gifted students' enjoyment of the experience



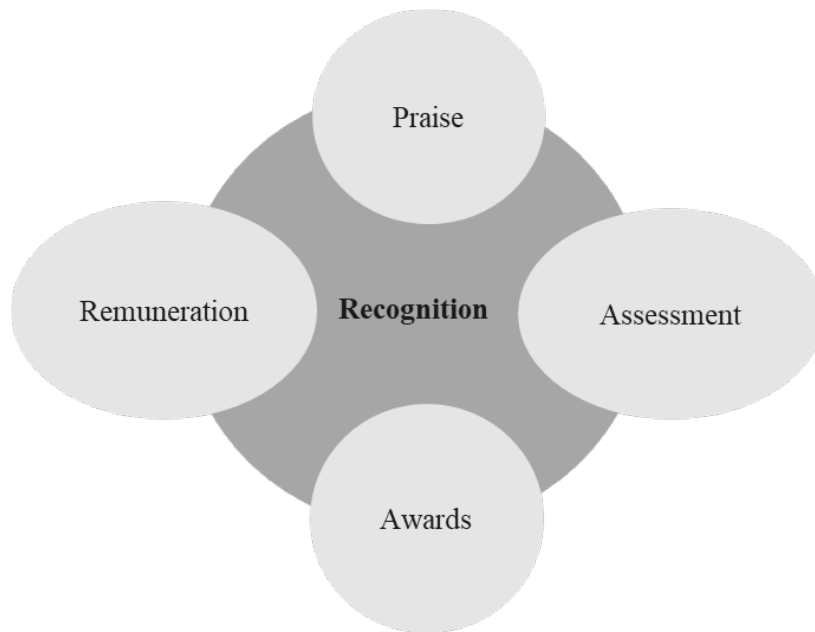
Source: own research

Gifted students have a genuine desire to engage in a wide range of activities to enjoy the experience. A genuine desire to engage in activities is fostered by the opportunity to make decisions independently and take control of your learning. If gifted students are calm and positive, they are more likely to enjoy learning. Pleasure emerges when the learning process is enjoyed, and the action is determined not by external stimuli but by the internal satisfaction that the student feels from the specific activity. Enjoying the experience is also related to satisfaction. Gifted students find learning satisfying when it aligns with their values and becomes fundamental to their personal growth. The environment in which a student learns is also significant for enjoying the experience. A full-fledged level of learning can take place in an environment that promotes the physical and emotional well-being of the individual student. Positive communication and a friendly atmosphere with peers are essential for enjoying one's learning experience.

The learning motivation of gifted students is driven not only by internal motivation but also by external stimuli. Recognition and support are the key factors that affect the external motivation of gifted students. The study revealed that praise, assessment, awards and remunerations are sub-factors characterizing the recognition of gifted students. On the other hand, support could be provided by parents, teachers, friends and peers.

Primary school teachers believe that gifted students can be motivated by expressing recognition. Recognition is the expression of positive appreciation, which can take the form of verbal praise, assessment, awards, and remunerations (Figure 4). Verbal praise (n=19) that gifted students receive from teachers, parents, and peers for demonstrating their abilities helps them strengthen their motivation and build confidence in their abilities. On the other hand, the assessment (n=9) can affect gifted students' motivation to learn positively or negatively. A high grade can give students validation of their abilities and motivate them to keep improving, but at the same time, it can create stress and fear of making mistakes and reinforce the tendency to be overly perfect.

Figure 4. Sub-factors characterizing recognition of gifted students



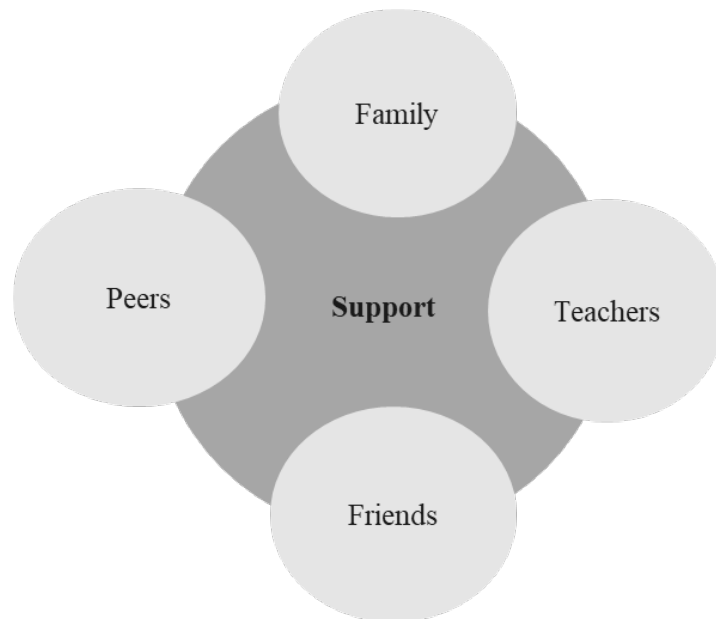
Source: own research

In addition, recognition can be demonstrated through awards and remunerations provided for gifted students (Figure 4). Awards ($n=5$) are a one-time remuneration given to a gifted student for outstanding achievements, special merits or significant contributions, winning competitions, scientific research projects and other events. Awards can be in different ways: trips, cash prizes, medals. These could be larger or smaller gifts that are unique. In turn, the remuneration ($n=2$) is regular, which can be given, for example, by parents for the excellence or diligence of a gifted child in studies. Sometimes, school administrations motivate the excellent academic achievements of their students by granting monthly scholarships. Proper and appropriate recognition as an external stimulus for learning motivation can help gifted students develop their potential, promote self-confidence and create a desire for new achievements.

Primary school teachers believe gifted students need support to maintain their learning motivation. They may also face intellectual challenges and emotional needs, so they expect support from their family, friends, teachers, and peers (Figure 5). The family ($n=9$) in the broader context that includes parents, grandparents and siblings can provide unconditional love, which is especially important at times when a gifted child is facing difficulties. Family support gives a gifted child a sense of security and the opportunity to maintain emotional balance in moments of crisis. The support of teachers ($n=15$) is also essential for developing gifted students. Respondents admit that the teachers are kind, understanding and inspiring, and they can support gifted students by providing diverse teaching methods and an individual approach, thus helping to discover and develop students' unique talents.

The teachers assume that gifted students also need support from friends ($n=5$) and peers ($n=2$) in primary school. The gifted students and their friends can engage in development-promoting joint activities, share experiences, and accept each other as they are. Nevertheless, peers can support gifted students by collaborating with them and responding adequately in specific situations.

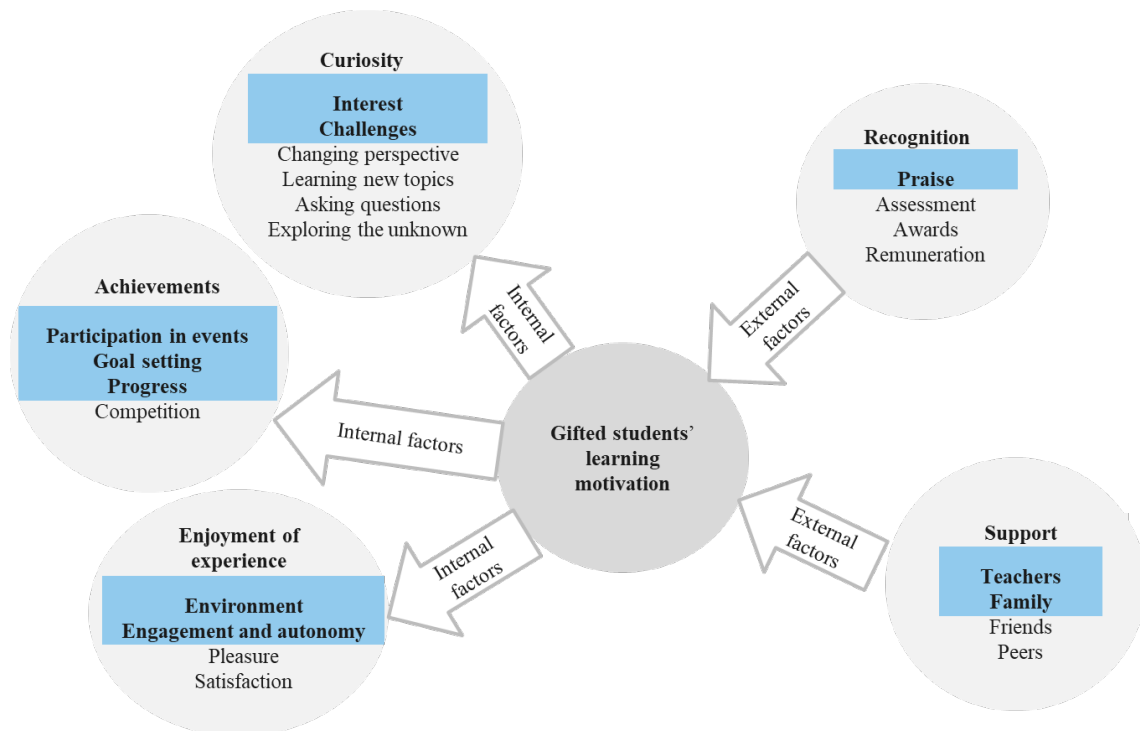
Figure 5. Sub-factors characterizing support of gifted students



Source: own research

The findings provide an opportunity to understand the factors influencing the learning motivation of gifted students based on the opinions of primary school teachers who work with such students daily. The study develops a learning motivation model to identify the factors and sub-factors influencing gifted students' learning motivation (Figure 6).

Figure 6. Gifted students' learning motivation model



Source: own research

Most primary school teachers realize that gifted students are motivated to learn by internal (n=106) rather than external (n=66) factors. Primary school teachers believe that curiosity

(n=37), achievement (n=36), and enjoyment of experience (n=32) are equally significant for gifted students in grades 1-6 to be internally motivated to learn. Both external stimuli that motivate gifted students to learn have also been rated equally by primary school teachers. External stimuli such as recognition (n=35) and support (n=31) are also necessary for motivating gifted students to learn.

5. Discussion

Curiosity, achievement, and enjoyment of experience are the key factors of internal motivation that determine gifted students' motivation to learn. These three factors of internal motivation are in line with previous research by Deci and Ryan (Deci & Ryan, 2000), which determined that internal motivation can be driven by curiosity, which is based on cognitive interest and a desire for competence, achievement the setting goals, when students want to improve and attain better results, and enjoyment of experience, which provides pleasure, joy, or excitement. The study revealed that according to primary school teachers' point of view, the learning motivation of gifted students could be affected by internal rather than external factors. This fact is similar to a study conducted by Lee and Gao (Lee & Gao, 2014), which determined that gifted students have a greater tendency to use autonomously regulated motivation and have significantly lower levels of external motivation than other students.

Primary school teachers consider that curiosity is determined mainly by interest, but achievements depend on goal setting and participation in different events. In addition, environment, engagement and autonomy are essential for enjoying the experience. These findings are consistent with Garn and Jolly's study (Garn & Jolly, 2014) on nine-year-old children, which found that choice, learning activities adapted to personalized interests and setting goals increased internal motivation in gifted children. Moreover, a study by Snickers-Mommer and colleagues (Snickers-Mommer et al., 2024) revealed that gifted students aged 11-12 had a greater need for autonomy to engage in tasks than their peers.

From primary school teachers' point of view, recognition and support are the factors of external motivation that determine the learning motivation of gifted students. These findings are consistent with the view of gifted students aged 9 years who believe that developing an external reward system can be motivating (Garn & Jolly, 2014).

Primary school teachers believe gifted students' motivation to learn could be affected by internal motives and external stimuli. This fact was proved in a study by Hornstra and colleagues (Hornstra et al., 2020) involving students from grade 3, which found that gifted students often exhibit adaptive and maladaptive forms of motivation. They may have high internal motivation to learn but also higher levels of being demotivated, which can lead to a lack of interest in school.

6. Conclusion

The first research question aimed to identify the primary school teachers' views on the internal factors that could promote the learning motivation of gifted students. The study revealed that according to primary school teachers' points of view, gifted students in grades 1-6 of primary education might be internally motivated to learn if they are curious, achievement-oriented, and enjoy their learning experience. In addition, students' interests and challenges are considered the most significant sub-factors characterizing curiosity. On the other hand, achievements are defined by participation in activities, goal setting and the ability to see one's progress. At the same time, engagement and the appropriate environment are essential for enjoying the experience.

The second research question was to determine the opinion of primary school teachers about external stimuli that impact the learning motivation of gifted students in grades 1-6 of primary education. Teachers believe gifted students need both recognition and support to be motivated to learn, and that could be most effective with the help of praise and if teachers and parents can support them more effectively.

The study concluded that primary school teachers understand the main internal and external factors influencing gifted students' learning motivation. Primary school teachers need to be able to identify gifted students in their class early and then enable them to learn internally motivated and, if possible, stimulate them with external factors to boost their learning motivation.

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