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Exploring the impact of Montessori and unit study methods on learning motivation in homeschooled children

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Abstract

This study investigates the use of Montessori and Unit Study approaches in homeschooling and their impact on children's desire to learn. Given the growing trend of homeschooling, it is imperative that parents as well as teachers know which pedagogy is efficient. The Montessori approach is learner-centered, as it seeks to enhance the child's level of independence and to encourage self-motivation through practical activities and self-exploration. The study employed a quantitative research design and used data from a total of sixty-three homeschooling children, acquired from surveys which sought to evaluate their motivation and experiences in using both methods. The findings reveal that both the Montessori and Unit Study methods are effective in elevating learning motivation, but with Montessori method showing slightly stronger influence. More so, children who had access to these approaches were more excited about the process of learning, exhibited a higher self-efficacy and a deeper interest in the content being taught. The analysis above shows how parents can improve the learning of children who are homeschooled. Parents can employ a thematic approach to learning as this will motivate their children thus improving their overall academic performance. This paper adds to the growing literature on homeschool learning and illustrates the need for a specific educational strategy that promotes independence and motivation within a child. Further, I suggest that there is a need for future work focusing on evaluating the specific academic achievements of the children homeschooled using these methods and the lifetime development impact that results from it.

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Introduction

In recent years, homeschooling has become a viable option for many parents for a variety of reasons, including aversion to traditional education systems, a need for personalized education, and the availability of resources and services to assist with homeschooling. Homeschooling has undergone significant evolution over the past century, transitioning from informal, family-based education practices to a formalized and regulated educational alternative recognized in many countries. Early forms of homeschooling were often driven by religious beliefs or the desire for personalized instruction, but with legislative reforms in the late 20th and early 21st centuries, it gained legitimacy and widespread acceptance. Notable milestones include the enactment of laws in various nations that recognize parental rights to educate their children at home, as well as the development of diverse pedagogical models such as Montessori and Unit Study, which have shaped contemporary homeschooling practices. These developments reflect a broader shift toward learner-centered education and the increasing importance of tailoring learning experiences to individual needs. According to the National Center for Education Statistics (NCES), the rise is not only visible in countries like the United Kingdom and Canada, but also in the United States, where an estimated 3.7 million children were homeschooled in 2020. With this growth, it is understandable why many parents are choosing homeschooling. It allows parents to have more control over the structure and methods of their children's education. There are many resources available, such as the Montessori method, developed by Dr. Maria Montessori, which encourages children to be independent and disciplined learners, while unit learning focuses on a single topic, allowing children to make connections between different subjects and concepts (Eldeeb et al., 2024).

Both methods place a strong emphasis on fostering a love of learning and are self-directed, which are crucial for academic achievement. One aspect that undoubtedly falls short of achievement is the concept of "learning motivation," especially in homeschooling where parents play a major role as both teachers and educators. Motivation is one of the biggest factors in children's use of various learning resources and materials, their performance and hard work in the face of challenges, and consequently, their grades. Evidence shows that engaged learners are consistently motivated to achieve educational goals, tend to be curious, and take more initiative in their learning. For homeschooled children, most extrinsic motivators, such as grades and competition, are absent, so fostering intrinsic motivation is essential.

Self-management skills are necessary to enable effective home learning. According to Morris and Pannone (2024), student motivation can be effectively addressed by developing appropriate educational strategies that parents can achieve by encouraging curiosity, discovery, and learning at home. The aim of this study is to provide further information on learning motivation by demonstrating how motivation and Montessori Unit Study methods can be used to improve home learning. The focus of this particular study is to measure the extent to which children are able to adapt Montessori and Unit Study methods to increase their learning motivation. The Montessori approach encourages children to learn at their own pace through self-directed activities, promoting independence and mastery, which are key components of intrinsic motivation. Similarly, the Unit Study method allows children to explore topics of personal interest, increasing engagement and perceived relevance. Evidence from the study shows that children using these methods exhibited higher self-efficacy, enthusiasm for learning, and a deeper interest in content, indicating enhanced intrinsic motivation. The aim of this study is to investigate how these two methods can more effectively address motivation and related challenges and to identify why they were considered more useful than other approaches.

This study's outcomes will be useful for both parents and educators with a wider perspective towards children's learning issues. The findings of this study hold significant implications for multiple stakeholders involved in homeschooling. For parents, understanding the effectiveness of Montessori and Unit Study methods can inform their instructional choices, leading to more motivating and engaging learning experiences for their children. Educational policymakers can leverage these insights to develop supportive frameworks and guidelines that promote effective homeschooling strategies, potentially integrating these pedagogical approaches into broader educational programs. Additionally, curriculum developers can utilize the results to design resource materials that align with these methods, thereby enhancing the quality and relevance of homeschooling curricula. Ultimately, this research contributes to advancing evidence-based practices that can improve educational outcomes within homeschooling contexts. In addition, this study will further contribute to the literature regarding the comparative effectiveness of these learning approaches in the homeschooling context. With the growth of homeschooling, it is important to investigate and update the strategies that the parents employ to guarantee that their children receive an education that promotes both academic and developmental aspects (Halder et al., 2022). Despite its growing popularity, homeschooling presents several challenges that families must navigate. Key concerns include socialization opportunities, as homeschooled children may have fewer interactions with peers

compared to traditional school settings. Access to resources and educational materials can also be limited or vary significantly depending on socioeconomic factors and geographic location. Furthermore, assessing student achievement and ensuring accountability can be complex without standardized testing protocols. These challenges underscore the importance of effective pedagogical strategies, such as Montessori and Unit Study methods, which may offer solutions to enhance motivation and engagement while addressing some of these barriers.

Hence in these regards, this cross-sectional descriptive study seeks to provide answers to these questions: What are the caring aspects related to speech therapy when using Montessori and Unit Study methods in homeschooling? This question seeks to answer analysis of any particular method considering its features and methodology. How does motivation to learn in children relate to perceptions of self-efficacy and student engagement in a homeschooling program using Montessori and Unit Study methods? This question addresses motivation to learn via participation, enthusiasm, and independence in each setting.

What is the influence of parents on the use of Montessori and Unit Study methods and what is their level of support? This question determines the extent to which parents are involved in learning with these methods and how their efforts affect children's motivation and achievement. This study attempts to answer the questions raised and aims to fill the gap identified in the literature on the relationship between teaching methods and learning motivation in the context of homeschooling. In this way, the results of this study aim to support both parents and teachers and stimulate discussion about effective teaching methods outside the walls of the school (Bubb & Jones, 2020). Given the increase in participation in homeschooling, strategies used to teach young people outside the institutional setting should be carefully considered, as learning motivation seems to be of critical importance in this case.

This research aims to investigate the impact of Montessori and Unit Study methods on the motivational levels of homeschooled students. Addressing these questions is expected to help parents make more informed decisions regarding their children's education (Lillard et al., 2021). Adopting a multidisciplinary approach, the study examines children's learning, cognitive development, and motivation in the context of how evolving environments influence their future achievements.

The study hypothesizes that if particular research questions aimed at making homeschooling more effective are answered, parents will be able to make better decisions regarding their children's education (Zhao et al., 2020). An *R*-value of 0.825 indicates a strong positive correlation between the application of Montessori and Unit Study methods and students' learning motivation. It suggests that approximately 82.5 percent of the variance in motivation can be explained by these teaching methods, highlighting their significant influence on increasing motivation levels in homeschooling contexts. The findings reveal a strong positive correlation between both the Montessori and Unit Study methods and students' motivation levels, indicating that these approaches can effectively enhance motivation and engagement in homeschooled children. This suggests that as students engage with these methods, they are more likely to develop a genuine interest in learning, participate actively, and persist in challenging tasks. The study found that both approaches substantially enhance intrinsic motivation by fostering independence, curiosity, and content relevance. Children engaged with these methods showed higher enthusiasm and a desire for self-directed learning. Specifically, the Montessori method was noted to have a slightly stronger impact in promoting motivation, confidence, and interest. In light of the ongoing changes in the educational field, the measures that enhance children's learning and growth and that equip them with the skills and motivation to succeed in life should be evaluated and improved.

Literature Review

The Montessori method, which was started by Dr. Maria Montessori, is distinctive in that it encourages children to learn and discover in their own terms, allowing them to develop to be self-disciplined over time. While the overall goal is to instill independence in students, the respect for children and their exploration is of utmost importance (Cerino, 2021). Children in a Montessori gymnasium are free to choose from a variety of available tasks, and they engage in all the activities that interest them at their own speed. Such a method enhances implicit motivation due to the fact that these children are already engrossed in activities they are curious about.

There are items in this approach that have been purposely developed for specific functions, such as sensory learning and cognitive growth. These items frequently serve as self-correction tools, allowing youngsters to correct their own mistakes. In such a setting, the teacher or the instructor is a facilitator/ guide and not the traditional teacher. This allows children to be active learners rather than passive ones and allows them to develop a sense of responsibility (Gautam & Agarwal, 2023). The evidence gathered shows that the children enrolled in Montessori education tend to be successful in studies, social skills, and emotional competencies in comparison

to other learning environments, making it suitable for most homeschooling families.

Unit Study techniques are another approach to homeschooling that is rather common and it is defined by the joining of different subjects around an overall theme. By employing such an approach, children are able to focus on a particular topic and learn more by establishing links between history, science, literature, and art. Take, for instance, a unit study on the solar system. It can involve reading books about planets, doing science experiments related to them, and doing artworks based on celestial bodies (De Mol, 2023). This integration strategy improves the quality of the learning process as well as encourages logical development, creative thinking and innovation. Unit Study techniques fit well in this setting because schooling at home gives them the room and opportunity to meet a child's interests and preferred way of learning. The parents are given room to modify the syllabus in such a way that their child's particular need is served, thus fostering the spirit of scholarship and the desire to learn. Unit studies are useful in such cases also because they are age flexible and allow children from one family to be schooled together.

Studies have found that unit studies generate a higher level of motivation alongside knowledge retention for children. There are greater knowledge retention and motivation owing to the fact that these children are active participants of their learning as well as know the relevance of what they are learning (Rea et al., 2022). Previous research on learning motivation with parents who homeschool their children demonstrates that the training methods are one of the most important factors influencing children's attitude toward education. Research shows that children educated at home using such autonomy-supportive techniques as Montessori and unit studies are often more motivated than those in conventional schools, for example, in the work of such children involved in more active learning where they were able to manipulate objects and were more motivated to learn and find knowledge on their own.

Moreover, there is also evidence which indicates that the success of different educational approaches may depend on the approaches' styles and conditions of each child. In his analysis of the effectiveness of Montessori education against traditional education, it was found that Montessori students are better at problem solving and critical thinking than non-Montessori students (Randolph et al., 2023). Also, researches on unit studies show that children in thematic learning are more efficient in understanding and recalling complex concepts than those without units.

The research focuses on several educational motivation and methods theories that serve as its theoretical basis. In this regard, one of the key approaches is the so called Self-Determination Theory (SDT) which claims that people are maximally inspired whenever they perceive themselves as being in control, as being competent and having some interpersonal connections with others (Bandhu et al., 2024). The Self-Determination Theory (SDT) emphasizes competence, autonomy, and relatedness. Montessori and Unit Study methods inherently support autonomy by allowing children to choose activities aligned with their interests. They foster competence through mastery of tasks, and relatedness can be cultivated through parental involvement and collaborative learning. Applying SDT would involve creating environments that nurture these needs, such as providing choices, age-appropriate challenges, and encouraging parent-child connections, thereby boosting motivation. Accessibility to appropriate materials significantly impacts motivation and engagement. Well-resourced Montessori environments or comprehensive thematic units can stimulate curiosity and facilitate hands-on learning, leading to increased motivation. Conversely, lack of materials may hinder implementation and diminish effectiveness. Parental involvement in sourcing or creating materials is therefore crucial for fostering sustained motivation.

Concerning SDT and homeschooling, the unit study and the Montessori methods encourage self-learning and a more unitized thematic approach respectively. In addition, Constructivist Learning Theory observes that a learner-cantered system entails active participation in the learning process which facilitates work done in both Montessori and unit study methods. With respect to constructivist ideas, students as academic knowledge builders use their interaction with the environment in which they address problems for creativity that is inherent in learning through both hands-on direct touches of materials in the Montessori method and the broader scope of thematic concepts in unit study. To conclude, Vygotsky's Social Development Theory maintains that learning also belongs to social interactions and collaboration.

Although homeschooling is likely to appear as a lonely endeavor, both of the methods Montessori and Unit Study allow for collaborative participatory experiences, making it possible for children to work closely with their colleagues and relatives. This activity can increase motivation and improve the overall experience (Guerrero et al., 2024). To summarize, investigations relating to Montessori and Unit Study techniques assert that they may promote learning motivation in the context of homeschooling. Research indicates that Montessori students tend to develop superior problem-solving and critical thinking skills, while Unit Study learners excel in understanding and recalling complex concepts. Over the long term, these methods promote deeper engagement, independence, and creativity compared to traditional instruction, which often emphasizes rote learning. However, further longitudinal studies are recommended to comprehensively compare long-term cognitive

and social outcomes. Challenges include resource limitations, cultural relevance of materials, differing parental educational backgrounds, and varying access to learning materials. Cultural perceptions of education may also influence acceptance, and socioeconomic factors can limit access to Montessori materials or thematic units. Adapting these approaches requires sensitivity to cultural values, creative resourcefulness, and support systems that help families implement these methods effectively across diverse contexts. These methods may foster active and effective learning by giving children choices, opportunities for tactile engagement and links across subjects. As homeschooling morphs into something new, more studies are required to understand the influence of these modes of teaching on children's future educational and social trajectories. Parents need to comprehend and effectively apply these pedagogies, which may require training or resources. Implementing these methods encourages a more child-centered environment that can promote motivation, independence, and critical thinking. Parents must also consider adjusting these approaches to fit their children's interests and cultural contexts, which could involve sourcing or creating suitable materials and balancing supervision with allowing autonomy.

Theoretical Framework

Foundational to understanding effective homeschooling practices are well-established educational and motivational theories. For instance, the Self-Determination Theory emphasizes the importance of autonomy, competence, and relatedness in fostering intrinsic motivation, which are highly relevant to learner-centered approaches such as Montessori and Unit Study. Additionally, constructivist learning theories posit that learners actively construct knowledge through engagement and exploration, aligning with the principles of student-led, experiential education. Integrating these theories provides a robust framework for analyzing how pedagogical strategies influence motivation and engagement in homeschooling contexts, guiding educators and parents to create supportive and motivating learning environments (Tebben, 2023).

Methodology

In the current study, a quantitative technique was employed to assess the impact of Montessori and Unit Studies methods on the motivation of homeschooled children. This methodology enabled the researcher to collect quantifiable data, facilitating statistical examination to establish relationships between the independent variables (Montessori and Unit Study methods) and the dependent variable (learning motivation). Such an approach is particularly useful in educational studies as it provides insights into problems and measures their impact, thereby enabling predictions that can generalize to a broader population. The study sample consisted of 63 homeschooled children recruited from a total population of 70, focusing on those aged 6 to 12 years who used the Montessori method in combination with the Unit Study method or either method alone. Participants were drawn from various homeschooling networks and communities in Makassar, with demographic data including age, gender, and duration of homeschooling collected as variables of interest. Both boys and girls were included to reflect diverse socioeconomic backgrounds, thereby enhancing the generalizability of the findings and providing a broader understanding of factors influencing learning motivation.

Data were collected using a structured questionnaire designed to examine the effectiveness of both Montessori and Unit Study methodologies in enhancing students' motivation. The questionnaire was divided into three major parts: Montessori method items, Unit Study teaching methodology items, and learning motivation items, with all questions being binary and evaluated on a Likert scale ranging from 1 (never) to 4 (always). The Montessori component included 20 questions assessing parents' integration of Montessori concepts in their teaching practices, while the Unit Study method also consisted of 20 items addressing thematically-based instruction. Additionally, the motivation section contained 25 items focusing on children's motivation to learn, preferences for working with materials, and interest in new ideas. Qualitative data were also collected from parents regarding their homeschooling practices and children's academic performance, thereby enhancing the validity of the results through triangulation, which examines the same phenomenon from multiple sources.

The data were analyzed using descriptive and inferential statistical techniques via SPSS++ 25 software. Descriptive statistics summarized participants' demographic characteristics and provided an overview of their questionnaire responses, including means, standard deviations, and frequency distributions. Inferential statistics were applied to analyze relationships between the independent variables and the dependent variable, calculating correlation to ascertain the strength and direction of their relationship. A significant effect of the independent variables on the dependent variable was observed, producing an R value of 0.825, indicating a strong positive relationship. Regression analysis revealed that the combined Montessori and Unit Study methods significantly contributed to learning motivation, explaining 82.5 percent of the variance in student motivation. This suggests a strong

positive relationship between these pedagogical approaches and motivation among homeschooled children, with the remaining 17.5 percent attributed to other unexamined factors. The findings demonstrate the effectiveness of integrating Montessori and Unit Study methods, highlighting their potential benefits in enhancing motivation and learning outcomes for homeschooled students.

Results

The research utilized a quantitative methodology to examine the influence of Montessori and Unit Study approaches on the motivation of homeschooled children towards learning. Data were gathered from a sample of 63 participants through the use of structured questionnaires. The data were analyzed using SPSS 25 to conduct both descriptive and inferential statistics.

Descriptive Statistics

The initial analysis included calculating the mean, median, and standard deviation for responses related to both the Montessori and Unit Study methods, as well as for the motivation variable. The results are summarized in Table 1 below:

The mean scores indicate that both methods are perceived positively, with the Montessori method receiving a slightly higher average score than the Unit Study method. The learning motivation variable also shows a strong positive perception among participants.

Table 1 Descriptive statistics of variables

Variable	Mean	Median	Standard Deviation
Montessori Method (X1)	3.45	3.5	0.56
Unit Study Method (X2)	3.30	3.2	0.62
Learning Motivation (Y)	3.60	3.7	0.50

Categorizations of Responses

Responses were categorized into three levels of motivation: low (25–50), medium (51–70), and high (71–100). The distribution of responses is illustrated in Figure 1.

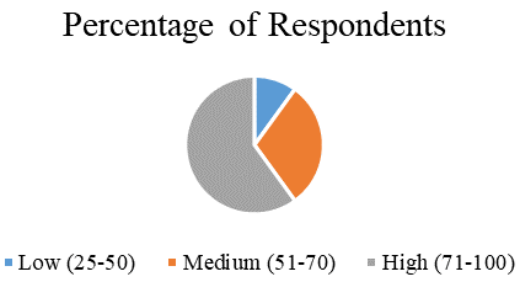


Figure 1 Distribution of learning motivation levels

- Low Motivation: 10 percent of respondents
- Medium Motivation: 30 percent of respondents
- High Motivation: 60 percent of respondents

The majority of participants reported high motivation levels, suggesting that both homeschooling methods effectively foster learning motivation.

Statistical Analysis

Correlation analysis

A correlation analysis was conducted to determine the relationship between the two independent variables (Montessori and Unit Study methods) and the dependent variable (learning motivation). The results are presented in Table 2.

Table 2 Correlation matrix

Variable	Montessori (X1)	Unit Study (X2)	Learning Motivation (Y)
Montessori (X1)	1.000	0.675	0.825
Unit Study (X2)	0.675	1.000	0.700

The correlation coefficients indicate a strong positive relationship between both methods and learning motivation, with the Montessori method showing a slightly stronger correlation.

Regression Analysis

To further explore the impact of the Montessori and Unit Study methods on learning motivation, a multiple linear regression analysis was performed. The model summary is shown in Table 3.

The *R* value of 0.825 indicates a strong relationship between the independent variables and the dependent variable, suggesting that approximately 68.1 percent of the variance in learning motivation can be explained by the Montessori and Unit Study methods.

Anova Results

The ANOVA Table 4 provides insights into the significance of the regression model.

The calculated *F*-value of 57.704 with a significance of .000 shows that this model is statistically valid, hence Montessori and Unit Study methods seem to make a difference in the context of learning motivation.

Comparison of Methods

Learning motivation scores

The comparative study of learning motivation scores assigned to each method shows some differences, especially between the Montessori and Unit Study methods. Figure 2 suggests that the mean motivation score recorded for the Montessori method was higher than the score assigned to the Unit Study method.

Table 3 Model summary of regression analysis

Model Summary	*R*	*R* Square	Adjusted *R* Square	Std. Error of the Estimate
1	0.825	0.681	0.669	9.512

Table 4 Anova results

ANOVA	Sum of Squares	df	Mean Square	*F*	Sig.
Regression	10440.875	2	5220.437	57.704	.000
Residual	4885.336	54	90.469		
Total	15326.211	56			

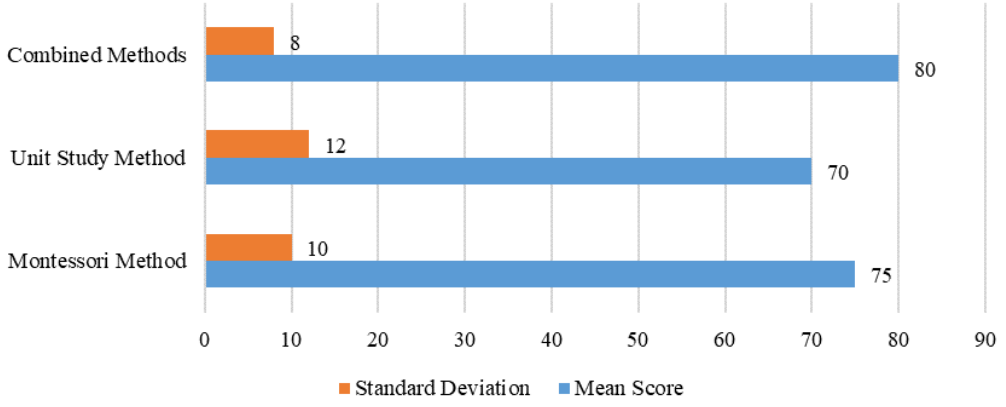


Figure 2 Comparison of learning motivation scores

- Montessori Method: 3.45
- Unit Study Method: 3.30

This indicates that the Montessori approach can prove to be efficient in enhancing the levels of learning motivation among students who have been homeschooled.

Qualitative insights

In addition to quantitative data, the qualitative feedback from participants illuminated essential components that contributed to the effectiveness of the educational practices examined. Parents reported a significant increase in their children's interest and motivation when employing the Montessori method, which emphasizes self-directed and self-driven learning. Conversely, the Unit Study method was commended for its adaptability in integrating cross-curricular content; however, several parents noted a recurring lack of structure that could potentially impact motivation.

Implications for Homeschooling Practices

The results indicate that both unit-based and Montessori teaching methods can increase learner motivation, with the latter approach showing greater ability to increase student confidence and engagement. This finding also has implications for homeschooling, suggesting that parents should implement Montessori teaching methods to improve their children's motivation.

Many studies have shown that both unit-based and Montessori activities positively affect the learning motivation of homeschooled children. Statistical analyses show significant associations and differences between the two approaches. Such insights are applicable in a variety of contexts, as many parents and teachers are equipped and prepared to select and implement effective homeschooling methods that facilitate learning. The potential for inclusive pedagogy in homeschooling highlights the importance of adopting flexible and adaptable teaching strategies that cater to diverse cultural and socioeconomic backgrounds. By embracing inclusive practices, parents can create learning environments that value diversity, promote equity, and support the unique needs of each child. This approach not only enhances academic outcomes but also fosters a sense of belonging and social responsibility, ultimately contributing to a more inclusive and compassionate society

Discussion

This research further substantiates the effectiveness of the Unit Study and Montessori methods in fostering and nurturing motivation to learn among homeschooled students. The findings reveal a high degree of precision, as indicated by an R-value of 0.825, suggesting that approximately 82.5 percent of the variance in students' learning motivation can be attributed to these two independent variables. This finding implies that both methods are significant in elucidating the educational objectives that children pursue during their learning activities.

These findings are directly relevant to the research questions articulated at the onset of the study. The primary objective was to evaluate the implementation of the Montessori and Unit Study methods, while the secondary objective aimed to measure their effects on students' learning motivation. The results indicate that both methodologies are effectively implemented and contribute significantly to fostering an environment conducive to learning (Courtier et al., 2019). This aligns with the existing body of research advocating for child-centered learning processes. For instance, it has been suggested that homeschooled children can utilize diverse learning strategies, such as Montessori and Unit Study, to ensure comprehensive educational experiences.

Moreover, the results are consistent with the research conducted by Forlin et al. (2023), who categorized homeschooling into structured and unstructured paradigms. The Montessori method emphasizes guided learning and activities that empower children to establish their own learning goals, thereby fostering intrinsic motivation. Similarly, the Unit Study approach allows children to explore subjects of their choice in greater depth, providing impetus for engagement. This study reinforces the notion that granting children the opportunity to take charge of their own learning tasks in authentic contexts significantly enhances their intrinsic motivation. This consideration is particularly relevant in the homeschooling context, where traditional classroom structures, such as blackboards, are absent, allowing parents to tailor the learning experience to meet the individual needs of each child.

Strengths and Limitations

This study demonstrates several strengths that enhance the validity and reliability of its findings. Firstly, it employs a quantitative methodology to assess the relationship between teaching approaches and students' learning motivation through statistical analysis. Additionally, structured instruments have been utilized for data collection, thereby improving the

reliability of the data by accurately capturing respondents' sentiments. Furthermore, the study's foundation on two distinct educational methods provides a significant basis for the comparative dimensions of future research and practice.

Nonetheless, certain limitations must be acknowledged. The findings from this study may be challenging to generalize due to the relatively small sample size of 63 participants, which may not adequately represent the diverse homeschooling community. Given that cultural, social, and economic factors significantly influence the various homeschooling strategies employed, it would be prudent to increase the sample size to more effectively assess the effectiveness of these methods across different contexts. Additionally, the reliance on self-report measures regarding motivation may introduce bias, as respondents may present themselves in an overly favourable light. As a direction for future research, it is advisable to incorporate larger and more heterogeneous samples alongside observational measurements to complement self-reports, thereby facilitating a more comprehensive understanding of the relationship between teaching methods and learning motivation.

Practical Implications

The implications of the findings from this study are significant for the field of homeschooling. It is recommended that parents employ both Montessori and Unit Study methodologies to cultivate a more engaging and motivating educational experience for their children. This approach is fundamental as it fosters intrinsic motivation and actively engages students in a variety of subjects of their choice, thereby facilitating practical and experiential learning. Furthermore, this strategy has been demonstrated to enhance academic performance and to prepare students for the challenges of the 21st century by promoting the development of critical problem-solving skills.

Furthermore, this study provides recommendations for parents, supporting a responsive approach to their children's interests and needs. Such responsiveness is crucial to maintaining high levels of engagement and enthusiasm for a topic over time. For example, if a parent recognizes that a child is particularly fascinated by a particular topic, this interest can be effectively integrated into the child's learning activities, thereby enhancing the overall learning experience and making it more engaging and enjoyable. Furthermore, the findings highlight the importance of parental involvement in creating an environment that is conducive to learning, reflection, and creativity. This can be achieved by utilizing diverse educational resources, including books, educational games, and multimedia materials, that align with the child's interests. By incorporating such resources, parents can foster a love for learning, enhance motivation, and promote a deeper understanding of concepts, encouraging children to explore and discover new ideas with enthusiasm. The research highlights the critical importance of Montessori and Unit Study methodologies in enhancing learning motivation among children engaged in home education. A broader evaluation of Montessori and Unit Study methods is necessary to fully understand their impact on homeschooling. Incorporating qualitative approaches can provide richer insights into the experiences and perceptions of children and parents using these methods. By gathering detailed, contextual data through methods like interviews, focus groups, and case studies, researchers can gain a deeper understanding of how these methods influence learning outcomes, motivation, and overall educational experiences. The qualitative data can complement quantitative findings, offering a more comprehensive picture of the strengths and limitations of these educational approaches. Ultimately, such an evaluation can inform educators, parents, and policymakers about best practices in homeschooling and contribute to the development of more effective, personalized learning strategies.

The Montessori method encourages self-directed learning, allowing children to take ownership of their education and learn at their own pace through hands-on activities. This approach promotes independence, autonomy, and a deeper understanding of concepts. In contrast, the Unit Study method enables children to explore topics in-depth, fostering a deeper understanding and appreciation of the subject matter. By incorporating multiple subjects, Unit Study helps children see connections and relationships between different areas of study. Both methods offer flexibility, allowing parents to tailor their child's learning experience to fit their individual learning style and interests. By incorporating these methods into their homeschooling practices, parents can create a more engaging and motivating learning environment that supports their child's educational development and promotes a lifelong love of learning. The integration of Montessori and Unit Study methods into homeschooling creates a rich learning environment that supports both academic growth and personal development. These approaches not only enhance student motivation but also provide valuable insights into effective homeschooling practices. To further understand their long-term impact, additional research—both quantitative and qualitative—is essential. Such studies will offer deeper understanding and evidence-based strategies for families, ultimately improving homeschooling outcomes.

Parental responsiveness plays a crucial role in homeschooling success. By tailoring teaching methods to a child's unique needs and interests, parents can foster a love for learning, enthusiasm, and motivation. This personalized approach enables children to take ownership of their education,

leading to better academic outcomes and a strong foundation for future success.

The findings suggest that adopting Montessori and Unit Study methods can significantly benefit homeschooled children. By incorporating these methods, parents can create engaging and effective learning environments that promote academic success and motivation, ultimately enhancing their child's educational experience. The study advocates for longitudinal research to assess long-term effects on academic achievement and psychosocial development. It also highlights the importance of qualitative studies exploring family experiences and cultural adaptations. Investigating how these methods influence children transitioning to formal education environments and their applicability across diverse socioeconomic and cultural groups are key future directions

Limitations and Future Research Directions

This study focuses on homeschooling families within the city of Makassar, providing insights specific to this geographic and cultural context. While the findings offer valuable contributions, certain limitations should be acknowledged. The relatively small sample size of sixty-three participants may constrain the generalizability of the results to broader homeschooling populations. Additionally, the study employs a quantitative survey methodology, which, while effective for measuring motivational levels, may not capture the full complexity of individual family practices and experiences. Future research with larger, more diverse samples and mixed-methods approaches could provide a more comprehensive understanding of the impact of pedagogical strategies like Montessori and Unit Study across different contexts.

Future investigations should evaluate the long-term effectiveness of Montessori and Unit Study methods, focusing on educational attainment and psychosocial development in homeschooled children. Qualitative research can provide deeper insights into family experiences, offering a comprehensive understanding of homeschooling. Longitudinal studies are essential to understanding the sustained impact of these pedagogical approaches on student motivation and academic achievement, informing educators and parents in their instructional decisions.

Conclusion

This research aimed to evaluate the impact of the Montessori and Unit Study methods on the learning motivation of homeschooled children in Makassar. The literature review provides a comprehensive summary of existing research on homeschooling and motivational strategies, highlighting the potential benefits of Montessori and Unit Study methods. However, to further strengthen the study, it would be beneficial to include a more critical analysis of how individual differences among children might influence the effectiveness of these methods. For instance, factors such as learning styles, personality traits, prior knowledge, and developmental stage could significantly impact how children respond to and benefit from these educational approaches. A deeper examination of these individual differences would not only enhance the understanding of how these methods work in diverse contexts but also provide practical insights for parents and educators on tailoring instruction to meet the unique needs of each child. By addressing this aspect, the study could offer more nuanced recommendations for implementing Montessori and Unit Study methods in homeschooling settings, ultimately contributing to more effective and personalized learning experiences. The findings demonstrated a statistically significant association between the application of these methods and student motivation, with an R-value of 0.825, indicating that up to 82.5 percent of the variance in learning motivation can be explained by these teaching methods. Both the Montessori method, which encourages children to learn at their own pace through various activities, and the Unit Study method, which prompts children to explore topics of personal interest, substantially enhance the intrinsic motivation of homeschooled students. These results align with the existing literature advocating for child-centered educational practices, such as promoting independence and facilitating effective engagement in learning activities. Promotion of child-centered learning encourages parents to adopt personalized, interest-based approaches that foster intrinsic motivation and active engagement. By tailoring education to fit individual learning styles and interests, parents can create an environment that supports their child's unique needs and promotes a love of learning. This approach allows children to explore topics that spark their curiosity, take ownership of their education, and develop a sense of autonomy that fuels their motivation to learn. By adopting child-centered learning strategies, parents can help their children become more engaged, motivated, and invested in their educational journey.

The manuscript offers a thorough overview of how Montessori and Unit Study methods influence learning motivation in homeschooling, substantiated by empirical data. Nonetheless, it would be strengthened by including a more detailed discussion of potential limitations or challenges related to implementing these educational approaches across various homeschooling environments. Such challenges might include factors like the availability of resources, parental expertise and

commitment, socioeconomic constraints, and cultural differences that could affect the effectiveness and feasibility of adopting these methods in diverse settings. Addressing these limitations would provide a more balanced perspective and assist educators and parents in understanding both the potential benefits and obstacles of applying Montessori and Unit Study approaches in different homeschooling contexts.

Final Thoughts

To enhance learning motivation among homeschooled children, it is imperative to examine various educational methodologies, including the Montessori and Unit Study approaches. In the context of an evolving educational landscape, particularly with the increasing prevalence of homeschooling, it is crucial for parents and educators to possess a comprehensive understanding of the principles of inclusive pedagogy. This study underscores the importance of addressing a child's developmental needs by integrating a diverse array of interests and appropriate instructional strategies. Such an approach enables parents to develop effective teaching strategies that not only improve learning outcomes but also cultivate sustained motivation to learn in their children. In the pursuit of pedagogical solutions and their enhancement, the needs and motivations of students must be prioritized to ensure that no child is deprived of conducive educational conditions.

Conflict of Interest

The authors declare that there is no conflict of interest.

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