



Analysis of Chess Practice as a Medium for Cultivating Responsibility in School-Age Children

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Abstract

This research is motivated by the low level of responsibility in children who participate in chess club activities, which is shown through undisciplined behavior such as arriving late, not completing practice, and not caring about equipment. This condition impacts the development of skills and decreases the motivation and quality of children's learning. This study aims to analyze how chess training can be a medium for instilling the value of responsibility in school-age children. The methodology used is a qualitative approach with a descriptive case study design. The research subjects consisted of children participating in a chess club, coaches, and club administrators selected through purposive sampling. Data collection techniques were carried out through observation, in-depth interviews, and documentation as supporting data for the research. Data analysis used an interactive model that includes data reduction, data presentation, and conclusion drawing, with data validity maintained through triangulation and member checking. The results show that chess training can instill the value of responsibility through disciplinary habituation strategies, such as time discipline, responsibility for the environment and equipment, and consistent religious values. The role of the coach is key through consistent application of rules, providing motivation, and the use of rewards and consequences. In conclusion, structured and systematic chess training can be an effective medium for developing children's responsible character through sustainable positive behavioral habits.

How to Cite

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INTRODUCTION

Character education is a fundamental aspect in the process of developing school-age children, especially in forming the value of responsibility (Rahman, 2022) "Education has a very important and central role in developing human potential and gradually shaping character towards a better direction." Which will play a vital role in academic and social life. This is in line with the opinion (Supriyadi, 2019) who stated that "Education is not only the transfer of knowledge but also the transfer of values." "education is not only a transfer of knowledge but also a transfer of value" The development of children's responsibility is closely related to the values instilled during training. This is supported by (Roqai et al., 2025) who stated that character and shared values contribute to building trust, loyalty, and commitment. Thus, activities such as chess practice have the potential to instill the value of responsibility. However, the reality on the ground shows that the sense of responsibility among children participating in extracurricular activities, including chess clubs, remains relatively low. This is evident in behaviors such as arriving late, not completing independent practice, and a lack of concern for the equipment used during practice. This situation not only impacts the quality of learning but also hinder optimal development of children's abilities and motivation to participate in club activities. These findings align with previous research showing that unstructured activities can reduce students' self-regulation and discipline (Sundaramadhavan et al., 2023) and that a lack of self-control in cognitive-based sports activities can impact performance and emotional stability (Saripudin & Komalasari, 2015).

Various previous studies have confirmed importance Extracurricular activities as a means of character building. Huda et al. (2024) showed that habituation through extracurricular activities can effectively instill the values of responsibility and discipline. Similarly, Muhamadi and Hasanah (2019) revealed that student involvement in social activities can increase concern and responsibility.

Responsible for the environment. Furthermore, (Martin & Evaldsson, 2012) emphasized that the integration of the learning environment, curriculum, and extracurricular activities is a key factor in the successful development of student character. In the context of learning, extracurricular activities have also been shown to significantly increase student motivation and engagement (Denault & Guay, 2017).

However, most of this research focuses on formal education, Islamic boarding schools (pesantren), and social activities, and has not specifically examined the role of chess as a medium for character development. However, theoretically, chess is a complex cognitive activity that demands strategic thinking, decision-making, and high levels of self-control (Gonzalez-Burgos et al., 2024) Furthermore, every move in a chess game carries consequences for which players must be accountable, making it a potentially effective means of instilling the value of responsibility directly and contextually.

Based on the above description, there is a research gap indicating that there are not many studies that integrate game-based cognitive activities such as chess with character development, particularly responsibility in school-age children. Therefore, this research is important to conduct in depth to examine how chess training in club activities can function as a medium for instilling the value of responsibility. This study aims to analyze the process, strategies, and dynamics of fostering children's responsible character through chess training. It is hoped that this will provide theoretical contributions to the development of character education and practical contributions to the implementation of more effective and meaningful extracurricular activities (Subandi et al., 2025).

METHOD

This research uses a qualitative approach with a constructivist paradigm that is oriented towards understanding meaning and the process of forming children's values of responsibility through chess club activities. This approach was chosen because the research did not aim to test quantitative relationships, but rather to explore in-depth social phenomena occurring in a natural context.

In qualitative research, understanding participants' subjective experiences and meanings is the primary focus, enabling researchers to obtain a comprehensive picture of the reality being studied (Pangastuti et al., 2025). The research model used is phenomenology, which allows researchers to holistically examine the dynamics of character development within a specific social unit, namely a children's chess club, especially when the phenomenon and context cannot be clearly separated (Ito et al., 2006).

This research focuses on the process of instilling the value of responsibility through chess practice, which includes aspects of time discipli-

ne, responsibility for the environment and equipment, and attitude formation through habituation and interaction during practice. The research was conducted at a chess club, involving children participating, coaches, and club administrators as research subjects. Subject selection was conducted purposively, considering their direct involvement in the activities studied and the adequacy of data to achieve information saturation (Bulkani et al., 2025).

Data mining techniques were conducted through observation, in-depth interviews, and documentation. Observations were used to observe actual behavior that reflected children's responsibilities during the activities. Semi-structured interviews were conducted to explore the experiences, perceptions, and strategies implemented by coaches in character development. Documentation was used as supporting data in the form of activity records, club rules, and other archives. The use of these various techniques enabled triangulation to increase data validity (Bulkani et al., 2025).

Data accuracy was improved through triangulation of sources and techniques, as well as member checking to ensure consistency between the researcher's findings and the participants' experiences. Furthermore, systematic compilation of research notes was conducted as part of an audit trail to maintain consistency and traceability of the research process (Agache & Vizitiu, 2022). Data analysis was conducted interactively through the stages of data reduction, data presentation, and continuous conclusion drawing until a deep understanding of the phenomenon being studied was achieved (Ristiana et al., 2025).

RESULTS AND DISCUSSION

This research was conducted during a children's chess club's activities over a specific period of time, involving children participating in the training, coaches, and club administrators as research informants. The research process was carried out in stages, starting from initial observations, data collection through interviews, and documentation of training activities. The number of informants consisted of children who actively participated in the training and one coach as a key informant. In general, this research focuses on how the chess training process can instill the value of responsibility through various coaching strategies implemented. The results of the research will be presented based on the main findings obtained from NVivo analysis, namely word clouds, hierarchy charts, and project maps.



Figure 1. Word cloud Coach Interview

Based on **Figure 1**. Word cloud Coach Interview visualization results, the most dominant words appearing are practice, chess, rules, character, move, and opening. The dominance of these words indicates that chess practice activities are at the core of the coaching process. This is done in clubs. Training not only serves as a means of improving playing skills, but also as a medium for character development in children.

"Every training session is conducted by dividing the children into several groups, and in each junior group there must be a senior to accompany or supervise the training session." (Coach)

The quote shows that the training process is structured and involves social interaction between members, which indirectly fosters responsibility. Furthermore, each move in a chess game requires children to think and be responsible for

Table 1. Research procedures

Phase	Main Activities	Focus on
Preparation results	Permit management, instrument preparation	Get access research and instruments worthy
Data collection	Data collection using triangulation techniques: observation, interviews, documentation	Getting research data
Data analysis	Processing data by reducing data (summarizing data), Processing data through reduction (summarizing), presentation (showing patterns or relationship), and drawing conclusion	Get conclusions as research answers
Final stage	Preparation of the results report	Compile a report from processed data

their decisions, thus fostering the value of responsibility through direct experience. This finding aligns with the theory that chess involves a high level of decision-making and self-control, thus contribute on character formation ((Gonzalez-Burgos et al., 2024)).

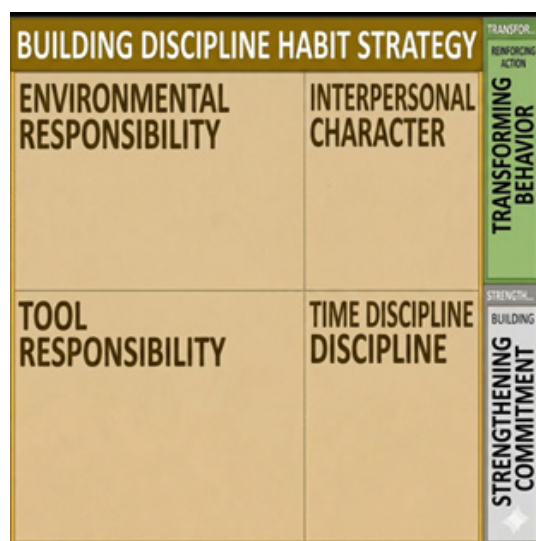


Figure 2. Hierarchy chart

Based on **Figure 2**. Hierarchy chart analysis, the main theme that emerged was the habituation strategy for discipline. This theme demonstrates that responsibility is fostered through consistent practice in training activities. Several key categories support this theme: environmental responsibility, equipment responsibility, time discipline, and religious character.

Regarding environmental responsibility, children are taught to maintain the cleanliness of the training area before and after activities. This demonstrates that responsibility extends beyond self-care to the surrounding environment. Regarding equipment responsibility, children are taught to tidy up and maintain the chess pieces they use, fostering a caring and disciplined attitude toward the facilities (Majumdar, 2022) which states that independent learning involves the ability to manage time and set priorities effectively in learning activities.

Time discipline is a crucial indicator in fostering responsibility, as children are required to be present before training begins. This habit demonstrates that responsibility is also linked to a commitment to time. Furthermore, religious character is also part of the development, such as the obligation to perform religious services on time. This demonstrates that responsibility is instilled holistically, encompassing both social and spiritual aspects.

This finding confirms that the habituation strategy is an effective approach in character education, as explained that character is formed through a habituation process that is carried out repeatedly and consistently (Huda et al., 2024).

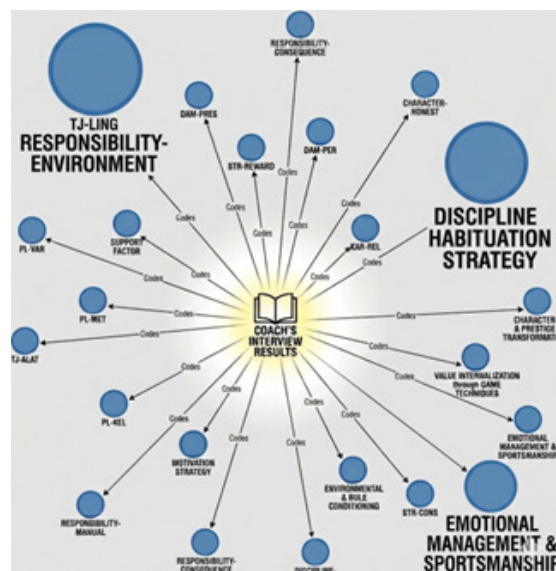


Figure 3. Main map

Based on the results of **Figure 3**. Main map analysis, it can be seen that there is a relationship between various codes such as time discipline, tool responsibility, environmental responsibility, motivational strategies, rewards, and consequences. Relatedness this shows that the formation of responsibility does not occur spontaneously, but through strategies systematically designed by the trainer. The coach acts as the main director in the coaching process, especially in implementing rules consistently and providing motivation to children.

"The strategy I use is to apply the rules consistently and give small rewards when the child does their job well." (Coach)

In addition, providing motivation when children experience defeat shows that the coach does not only focus on the results, but also on the learning process and mental formation of the child. These findings suggest that a combination of rules, motivation, and rewards and consequences are important factors in instilling responsibility. This aligns with the concept of activity-based learning, which emphasizes the importance of direct involvement and experience in character formation (Denault & Guay, 2017)

Overall, the research results show that chess training can be an effective medium in instilling the value of responsibility in children through the habit of discipline, active involve-

ment in training, as well as the role of a guide and motivator for participants.

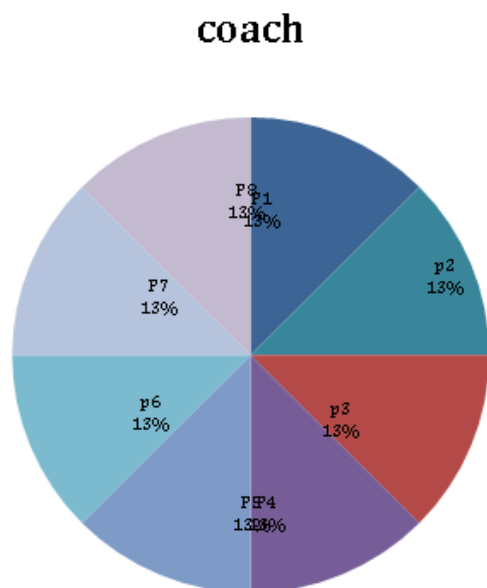


Figure 4. Bar Chart Observation

Based on **Figure 4. Bar Chart Observation** of coaches during chess training sessions, it was found that the coaching process was structured and systematic. Coaches conducted training sessions according to schedule and clearly organized the stages of the activity, from the opening, through the main body, to the closing, creating a focused and planned learning environment.

During the training, the coach provides a variety of exercises, including techniques, strategies, game analysis, and practice matches. This variation aims to develop the child's overall abilities, including playing skills, thinking, and decision-making. Furthermore, assigning independent tasks demonstrates the instilling of responsibility that continues beyond training sessions.

The development of responsibility is also evident in the coaches' emphasis on discipline, commitment, and responsibility. Coaches act as role models through discipline and consistency in training activities, thus supporting the internalization of values in children. The implementation of club rules and regular evaluations of the Children's games and attitudes become learning tools to understand the consequences and improve themselves.

Additionally, coaches instill values of sportsmanship, such as accepting victory and defeat graciously. Overall, coaches play a crucial role in developing children's responsible character through a structured, consistent, and role-modeled approach.



Figure 5. Word cloud Interview Athlete

Visualization results **Figure 5. Word cloud Interview Athlete** NVivo not only shows word frequency but also reflects patterns of meaning from the subjects' experiences. These findings indicate that chess activities function as a learning system involving cognitive, social, and affective aspects, and contribute to character development, particularly responsibility.

The predominance of words related to practice activities suggests that the value of responsibility is formed through direct involvement and repetitive processes. This aligns with (Graupérez & Moreira, 2017), who emphasized the role of chess in the development of executive functions, such as self-control and decision-making. The structure of regular practice also helps children understand rules and consequences, supported by the findings of (Sandoval-Tipán & Ramos-Galarza, 2020) related to improving planning and working memory skills.

Furthermore, the strategic thinking demands of chess foster decision-making and problem-solving skills (Sala et al., 2015), while social interactions and the role of the coach as a behavioral model strengthen the child's attitude formation (Nanu et al., 2023). Consistent practice also helps shape positive habits that develop into character (Jerrim et al., 2018).

Overall, word cloud shows an increase in the attitude of discipline and responsibility in children, so that it not only represents data, but also describes the character learning process that is taking place in real life.

Structure of the findings in **Figure 6. Hierarchy chart**, this study demonstrates that developing responsibility through chess practice is a multi-layered, dynamic, and interconnected process. The relationships between categories reflect not only sequence but also cause-and-effect relationships, so that character formation is under-

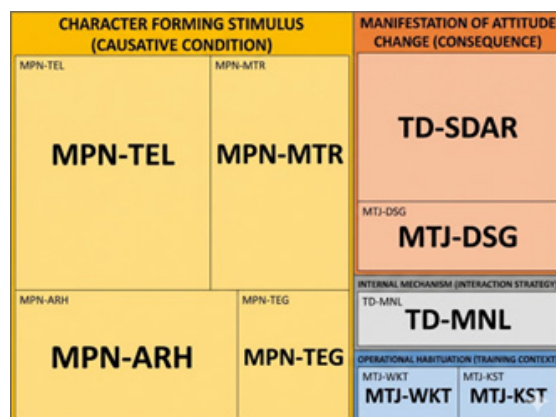


Figure 6. Hierarchy chart

Dominance factor Environmental studies show that the quality of learning, interaction patterns, and training approaches greatly determine the direction of children's behavior. This is in line with Supriyanto Manurung (2025), who emphasized the importance of the educational environment in shaping behavior. However, children also play an active role in interpreting experience, so that internal processes become key in forming responsibility.

Chess training, as an experiential learning method, provides children with the opportunity to understand the consequences of each action, thus developing reflection and decision-making skills. This process is reinforced through consistent repetition, which forms positive habits (Huda et al., 2024). The behavioral changes that emerge are gradual and result from the accumulation of ongoing processes (Ristiana et al., 2025).

Furthermore, social interactions during training contribute to the development of children's attitudes, such as sportsmanship and adherence to rules, as emphasized by (White & Shin, 2016). In this regard, coaches play a crucial role as facilitators and behavioral models that guide children's learning experiences (Assali, 2025).

Overall, hierarchy chart shows that chess training is an integrated and effective learning system in instilling the value of responsibility. Through a combination of a directed environment, direct experience, social interaction, and habituation, consistent, child able to develop a real sense of responsibility.

Relationship model **Figure 7**. Main Map from the NVivo analysis shows that the formation of responsible character through chess training takes place in an integrated and student-

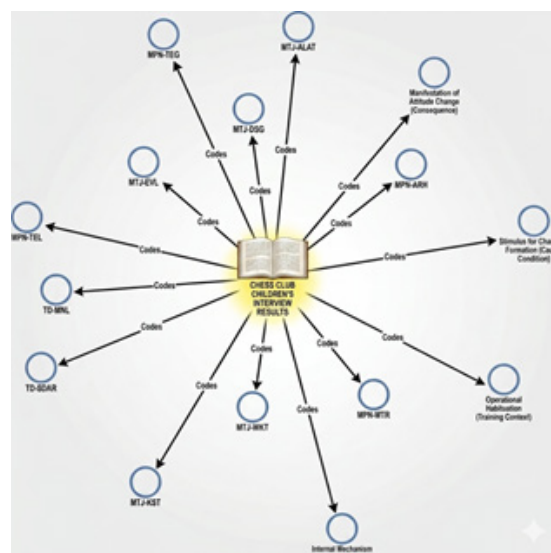


Figure 7. Main Map

The relationship patterns in the diagram show the flow from concrete experience to meaning and behavioral change. This process demonstrates that responsibility develops gradually through experience, reflection, and habituation. This is supported by (Baig et al., 2025), who stated that chess contributes to executive functions such as self-control and planning.

Furthermore, learning in chess practice is contextual and integrated, where various experiences complement each other in shaping children's understanding (Ye, 2025). This process also involves transforming external experiences into internal awareness, which is reinforced by improvements in working memory and information processing (Joseph et al., 2020). Connectedness between The components demonstrate that character formation occurs repeatedly and continuously, forming habits that ultimately become character. This experience-based approach is reinforced by the child's active involvement in the learning process (Sundaramadhavan et al., 2023) and the support of the social environment, such as coaches and peers (Nanu et al., 2023).

Overall, project map Studies have shown that chess training is an effective learning medium for instilling responsibility through the integration of experience, social interaction, and habituation. This process produces gradual but

profound behavioral changes, thus supporting the sustainable development of children's character.

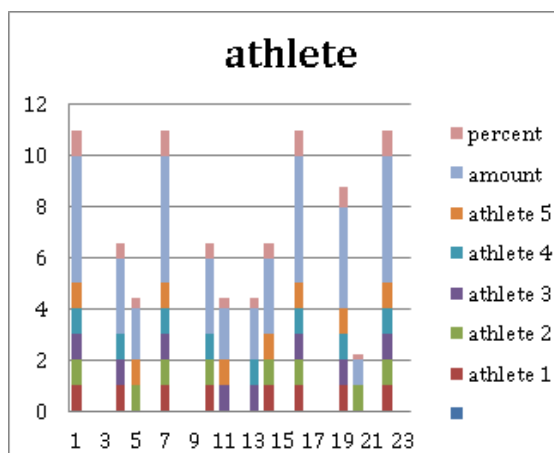


Figure 8. Bar Chart

Based on observations of athletes during chess training, most children demonstrated behavior reflecting the value of responsibility. This was evident in their high level of participation, such as arriving on time and following all training sessions diligently, demonstrating a commitment to the activity. During training, athletes are able to participate in various forms of training, such as technique, strategy, game analysis, and practice matches. This demonstrates active involvement in the learning process, not only physically but also mentally, reflecting seriousness and responsibility. Athletes are also able to complete assigned training tasks, demonstrating an understanding of their obligations within the training process. Discipline and commitment are evident in adherence to the coach's instructions, maintaining focus, and diligently executing training.

During interactions, athletes demonstrate respect by listening to and following the coach's instructions, as well as adhering to club rules. This demonstrates a good relationship between coach and athlete and an understanding of the importance of discipline. In the evaluation aspect, the athlete demonstrated a positive response by accepting criticism and attempting to correct mistakes, reflecting the ability to self-reflect as part of personal responsibility. Furthermore, the athlete also demonstrated sportsmanship by being able to accept criticism. Winning and losing well, and controlling emotions during the game.

Overall, athletes demonstrated developments in responsibility in participation, discipline, compliance, and self-management. This demonstrates that structured and ongoing chess training is effective in developing responsible character in school-age children.

How is the chess training process applied to school-age children in chess club activities?

The chess training process for school-age children in club activities is structured and systematic, and is oriented not only toward improving playing skills but also toward developing a responsible character. These findings were obtained through qualitative data analysis using a qualitative approach. thematic analysis, which allows for the identification of meaning patterns from in-depth interview and observation results (Mason & Francis, 2022).

This approach is relevant because thematic analysis used to organize and interpret data based on themes that reflect the experiences of research subjects (Fona, 2023; Naudé, 2024), and helps understand the contextual formation of the meaning of responsibility through a reflexive approach (Braun & Clarke, 2024). The analysis shows that the training process consists of an opening, core, and closing phase, which are conducted routinely. In the opening phase, the trainer conditions the children and ensures attendance, thus fostering the theme of time discipline and readiness as a form of initial responsibility (Kushnir, 2025).

In the core stage, training covers basic techniques, strategy, move analysis, and matches. An emerging theme is decision-making and individual responsibility, as children learn to take responsibility for every move in the game. This demonstrates that chess training is not only cognitive but also forms values through hands-on experience (Robinson, 2022). Giving independent tasks brings up the themes of independence and commitment, which indicates that children's responsibility develops not only during practice, but also outside of practice sessions (Rowland & Connolly, 2024).

The role of the coach is also an important theme as a character model and mentor, which shows that social interactions play a role in shaping children's meanings and experiences (Studenic et al., 2022). In the closing stage, the trainer provides an evaluation that brings up the theme of reflection and self-improvement, showing the development from external control to internal control as an indicator of character formation.

Overall, thematic analysis Studies have shown that chess practice fosters responsibility through consistent practice. Key themes include discipline, responsibility, independence, and the role of the coach. Thus, chess practice not only develops playing skills but also serves as an effective medium for character development (Remmen, 2024).

How mark not quite enough responsibility instilled through chess practice activities?

Instilling the value of responsibility through chess training for school-age children is done gradually through habituation, role modeling, and the application of rules in each training activity. This value is not taught theoretically, but rather through direct experience during training. This aligns with the concept of values education, which emphasizes character formation through consistent habituation (Saripudin & Komalasari, 2015). One of the main forms is the habit of time discipline, such as arriving on time, following a schedule, and completing exercises. This repetitive behavior forms a permanent habit according to the concept of habituation (Marsland, 2009). Furthermore, responsibility is instilled through adherence to game rules, such as fair play, fair play, and acceptance of the outcome. Clear rules help children understand the boundaries and consequences of their actions (Sagarin & Bronfman, 2024), and are internalized through social interactions (Martin & Ewaldsson, 2012).

Giving independent assignments helps build children's independence and commitment in managing their time and completing their responsibilities, in line with findings that responsibility-based learning increases individual awareness of roles and tasks ((Escartí et al., 2018). Furthermore, responsibility is also instilled through caring for equipment and the training environment, reflecting social responsibility in children's socialization process (Gevorgyan et al., 2025). The role of the coach is crucial as a role model in demonstrating discipline and responsibility. Children tend to imitate adult behavior, so the coach's attitude has an impact on character development and learning outcomes (Youn, 2016), and is strengthened through direct interaction and habituation (Döring et al., 2024). The characteristics of the game of chess also support the development of responsibility, as it demands concentration, decision-making, and awareness of the consequences of moves. This contributes to cognitive development and responsibility in decision-making (Ye, 2025), as well as improving problem-solving and strategic thinking skills (Trinchero & Sala, 2016).

Furthermore, evaluation and reflection are essential, with coaches providing feedback to help children understand mistakes and improve their behavior. This reflective process helps foster a deeper internalization of the value of responsibility (Jiménez-Parra et al., 2022).

Overall, the value of responsibility in chess training is instilled through habituation, rules, as-

signments, the coach's role model, and ongoing evaluation. This process makes chess training an effective way to develop responsibility in children through real-life and meaningful experiences.

How does chess training impact the development of responsibility in school-age children?

The impact of chess training on developing responsibility in school-age children shows positive and significant results in aspects of behavior, attitude, and self-awareness. The training activities are carried out systematically. Routine and structured play encourages the development of responsibility through direct experience, habituation, and social interaction. This aligns with research showing that chess learning contributes not only to cognitive aspects but also to the development of children's attitudes and behaviors (Ye, 2025).

One of the main impacts is improved time discipline, such as arriving on time and completing training sessions. These habits reflect a sense of responsibility and are associated with improved executive functions such as self-control and time management (Addarii et al., 2022). Chess practice also improves task responsibility, with children becoming more consistent in completing exercises and independent tasks. This indicates increased commitment and persistence, consistent with findings that chess learning impacts non-cognitive outcomes such as responsibility for learning (Islam et al., 2021). In addition, children demonstrate concern for the equipment and training environment, indicating the development of social responsibility through socialization in an educational setting (Gevorgyan et al., 2025). Through play, children also learn sportsmanship, emotional control, and positive acceptance of results, all of which are associated with increased self-control (Yakushina et al., 2025).

Furthermore, chess practice fosters responsible decision-making skills because every move has consequences. This process strengthens critical thinking skills and awareness of actions (Choi et al., 2025). Furthermore, there is increased self-awareness (self-awareness), where children understand the importance of rules and responsibilities in activities (Jerrim et al., 2018). The role of the coach and the training environment also strengthens this impact through social interactions, guidance, and role models that support the formation of children's behavior.

Overall, chess training has an impact on increasing discipline, commitment, caring, self-control, and awareness of action. Thus, chess training is an effective medium for developing

responsibility in school-age children. Through real, structured, and continuous learning experiences.

CONCLUSION

This study shows that chess training in club activities is an effective medium for instilling and shaping the value of responsibility in school-age children, because the structured, systematic, and continuous training process is able to integrate cognitive development with character building through direct experience. The instillation of the value of responsibility is carried out through the habit of time discipline, compliance with rules, giving independent tasks, concern for the environment and equipment, and the example of the coach, which is reinforced by social interaction and continuous evaluation so that these values are not only understood conceptually but also internalized in daily behavior. The impact is seen in positive changes, such as increased discipline, commitment, self-control, decision-making ability, self-awareness, sportsmanship, social responsibility, and the ability to self-reflect. Thus, chess training not only functions as a means of developing playing skills, but also as an effective character education medium in optimally developing the value of responsibility in school-age children.

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