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Introducing Tennis to Increase Primary School Pupils' Interest in The Sport

Wisnu Nugroho[1]*, Abdul Alim[2], Risti Nurfadhila[3], Rafidhiya Mohammad[4], Rekyan Woro Mulaksito Mulyadi[5], Joselyne Gratia Wohon[6], Angelina Ergie Visanda[7], Lisanul Fashihah[8]
[1-8] Yogyakarta State University, Indonesia
Email: wisnu.nugroho@uny.ac.id[1]

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Abstract

This study aimed to describe the implementation of an introductory mini tennis program and examine its potential to stimulate interest in tennis among primary school pupils. A descriptive-evaluative approach was employed in a community engagement program conducted at SD Negeri Model Sleman, Yogyakarta, Indonesia, on 27 August 2026, involving 30 pupils. Activities included equipment familiarization, instructional demonstrations, ball-control exercises, fundamental stroke practice, paired drills, and simplified rallies using beginner-friendly balls and mini nets. Evaluation employed a ten-item questionnaire with a four-point Likert scale covering instructional comprehension, practical experiences, enjoyment, comfort, and interest in future participation. Data were analyzed descriptively using frequencies, percentages, and mean scores. The program demonstrated the practical feasibility of introducing tennis through modified equipment and existing school facilities. Simulated questionnaire data produced an aggregate mean of 3.70 out of 4 (92.4%), while interest and willingness to participate again reached a combined mean of 3.73 (93.3%). These figures were illustrative rather than verified participant responses and could not establish actual improvements in interest or motor competence. The program provides an instructional framework for accessible school-based tennis introduction, although its educational effectiveness requires confirmation through authenticated responses and subsequent evaluation.

Keywords: *Community engagement, Mini tennis, Physical education, Primary school, Student interest.*

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INTRODUCTION

Physical education in primary schools has increasingly been recognized as an educational setting for developing motor competence, physical literacy, psychological engagement, and sustained participation in physical activity. Contemporary approaches to physical education emphasize learning experiences that integrate movement proficiency with enjoyment, confidence, and opportunities for active participation rather than concentrating exclusively on technical performance. The relationship between motor competence and cognitive functioning further demonstrates that movement-based learning has developmental implications extending beyond physical fitness, particularly during childhood when fundamental movement patterns and executive functions continue to develop (Bao et al., 2024). School-based physical literacy research has consequently expanded toward multidimensional approaches that accommodate physical, psychological, and behavioral characteristics, although the implementation of such approaches remains dependent on instructional conditions and pupils' access to appropriate learning opportunities (Grauduszus et al., 2024). Evidence concerning physical activity enjoyment, participation behavior, and motor competence among elementary school pupils also indicates that positive movement experiences constitute an important consideration when designing inclusive physical education activities (Ha et al., 2024). Tennis offers opportunities to develop hand–eye coordination, movement accuracy, spatial awareness, and responses to changing ball trajectories, but its introduction at the primary school level requires instructional adjustments that accommodate beginners' physical capabilities and limited technical experience. Conventional tennis equipment, specialized facilities, and technically demanding playing procedures may present practical barriers when schools attempt to introduce the sport to pupils

without previous experience. Modified tennis activities using smaller playing areas, appropriate balls, simplified rules, and introductory games provide a pedagogically plausible alternative because they reduce initial task complexity while preserving recognizable characteristics of tennis. The central educational issue is not merely whether primary school pupils can perform fundamental tennis movements, but whether an accessible and developmentally appropriate introduction can generate favorable learning experiences and encourage their willingness to participate in the sport.

Current scholarship on children's physical education demonstrates a growing convergence between motor competence development, motivational processes, and instructional design, although these dimensions have often been investigated through different research approaches. Systematic evidence concerning school-based physical literacy interventions indicates that educational programs increasingly address interconnected physical, psychological, and behavioral outcomes rather than isolated movement skills (Jerebine et al., 2024). Research on fundamental movement instruction similarly emphasizes the pedagogical relevance of teaching strategies adapted to children's developmental characteristics, particularly when teachers must accommodate differences in movement proficiency and learning readiness (Salters & Scharoun Benson, 2022). Game-based approaches occupy a prominent position within this development because structured play offers opportunities to integrate movement execution with active decision-making and participation. Reviews of sports game interventions and game-based physical education programs provide evidence relevant to fundamental motor skill development and enjoyment, supporting the educational potential of activities that combine movement practice with accessible game situations (Sun & Chen, 2024; Mo et al., 2024). The integration of small-sided games into physical education extends this approach by modifying playing conditions and participation demands, thereby providing an instructional framework for developing motor abilities through simplified sporting situations (Li et al., 2024). Evidence synthesized across elementary school physical activity interventions also reinforces the significance of structured educational opportunities for developing motor competence, while highlighting the diversity of intervention characteristics and learning environments considered in the literature (Moon et al., 2024). Motivational research complements these findings by examining how participation experiences, instructional content, and physical activity engagement relate to pupils' willingness to remain physically active (de Bruijn et al., 2023; Song et al., 2025). These research developments establish a substantive foundation for introducing tennis through adapted equipment and participatory games, but they do not establish that every game-based intervention produces equivalent motivational responses across different sports, populations, and educational settings.

Despite substantial progress in understanding game-based physical education, several limitations remain when this evidence is applied to short-duration introductory tennis programs for primary school pupils. Much of the available synthesis evaluates physical literacy, general motor competence, physical activity participation, or enjoyment across broader educational and sporting interventions, whereas the immediate process of familiarizing inexperienced pupils with a specific racket sport represents a more narrowly defined instructional situation (Jerebine et al., 2024; Moon et al., 2024). This distinction matters because successful participation in a general movement game does not necessarily demonstrate that pupils have acquired sufficient familiarity, confidence, or interest to consider engaging in an unfamiliar sport beyond the introductory session. The relationship between enjoyment and subsequent participation also requires conceptual differentiation, as a favorable response during an activity cannot independently establish sustained interest or continued behavioral engagement. Studies addressing motivation and emotions in physical education indicate that pupils' motivational experiences involve interacting psychological and instructional factors, making it inappropriate to interpret enjoyment as an automatic indicator of future participation (Fierro-Suero et al., 2023). Research examining basic psychological needs, educational stages, and enjoyment further indicates that motivational responses require attention to learner characteristics and educational conditions rather than reliance on a uniform interpretation of positive activity experiences (Navarro-Patón et al., 2024). Evidence concerning the relationship between motivational orientation, self-esteem, motor self-efficacy, boredom, and enjoyment similarly suggests that positive engagement is conceptually more complex than a single indicator of satisfaction (Reigal et al., 2024). A contextual and methodological gap therefore emerges between the broader evidence supporting game-based physical education and the practical assessment of initial tennis familiarization, perceived accessibility, immediate enjoyment, and willingness to participate again among primary school

beginners. This gap does not imply that introductory tennis instruction has been entirely neglected in previous scholarship; rather, it identifies the need for context-specific descriptive evidence that distinguishes immediate participant perceptions from verified improvements in motor competence or sustained sporting participation.

Addressing this gap has practical implications for primary schools seeking to diversify physical education experiences while working within the limitations of existing facilities, instructional resources, and pupils' initial sporting abilities. The introduction of unfamiliar sports requires more than providing information about equipment and playing rules because participation opportunities must accommodate differences in physical competence, prior experience, and confidence. Research on the assessment of physical literacy has demonstrated the methodological importance of selecting evaluation approaches appropriate to school-aged children, including attention to the validity, reliability, and feasibility of instruments used to represent multidimensional learning outcomes (Barnett et al., 2023). These considerations are particularly relevant to short community engagement programs, where a single session may permit the assessment of immediate perceptions but cannot adequately establish long-term behavioral change. Evidence linking objectively measured physical activity during primary school physical education with intrinsic motivation suggests that actual participation experiences warrant consideration alongside pupils' reported interest (de Bruijn et al., 2023). The effectiveness of introducing tennis through simplified games should consequently be examined through the accessibility of instructional activities, opportunities for direct practice, perceived enjoyment, and pupils' expressed willingness to engage in subsequent sessions. From an instructional perspective, failure to distinguish these components may lead schools to interpret enthusiastic responses as evidence of established sporting competence or durable participation without sufficient empirical justification. The practical significance of an appropriately evaluated program lies in its potential to inform decisions concerning adapted equipment, school-based sports outreach, extracurricular development, and cooperation between educational institutions and sports education providers. Scientifically, a context-sensitive evaluation can clarify which aspects of an introductory program are observable within a limited intervention period and which outcomes require subsequent longitudinal or experimental investigation.

The present study is positioned at the intersection of game-based physical education, introductory sports instruction, and school-based community engagement, with a specific emphasis on introducing tennis to primary school pupils who require developmentally appropriate learning opportunities. Existing research has provided substantial evidence on the educational relevance of game-based physical activities, motor competence interventions, and motivationally supportive physical education, but these findings have generally been developed through broader intervention frameworks rather than descriptive assessments of a single introductory tennis session (Mo et al., 2024; Li et al., 2024; Song et al., 2025). The proposed contribution concerns the adaptation of these pedagogical principles to a specific school-based outreach setting in which tennis is introduced through equipment familiarization, instructional demonstrations, ball-control exercises, fundamental strokes, and simplified rally activities. At SD Negeri Model Sleman, the program involved 30 primary school pupils and was implemented on 27 August 2026 through a combination of introductory explanations, direct practice, and modified mini tennis games. Its instructional arrangement used beginner-friendly balls, mini nets, and available school facilities to provide initial exposure without requiring conventional tennis-court conditions or advanced playing skills. Unlike studies primarily concerned with intervention effects on motor performance or psychological outcomes, this program adopted a descriptive-evaluative orientation focused on implementation characteristics and immediate participant responses. The evaluation framework incorporated ten questionnaire items addressing enjoyment, instructional clarity, equipment familiarity, perceived ability to attempt fundamental movements, comfort, interest in tennis, and willingness to participate again. The study's contextual novelty lies in documenting the operational integration of adapted tennis instruction and immediate pupil-response assessment within a primary school community engagement activity, rather than claiming the development of a new pedagogical theory or demonstrating causal intervention effectiveness. This contribution provides a setting-specific account of how established game-based instructional principles can be organized for initial racket-sport exposure while maintaining a clear distinction between program implementation, perceived learning experiences, and outcomes that require further empirical verification.

This study aims to describe the implementation of a mini tennis introductory program and examine its potential to stimulate interest in tennis among primary school pupils at SD Negeri Model Sleman. Specifically, it seeks to document the organization of introductory instruction, equipment familiarization, demonstrations, ball-control exercises, basic stroke practice, and simplified rally activities delivered through a participatory and developmentally appropriate approach. The study also aims to assess pupils' immediate responses concerning activity enjoyment, clarity of instruction, familiarity with tennis equipment, opportunities to attempt fundamental movements, perceived comfort, interest in tennis, and willingness to participate in subsequent activities. A descriptive-evaluative approach is employed to characterize program implementation and organize questionnaire responses using frequencies, percentages, mean scores, and proportions of the maximum possible score. The inquiry is restricted to the immediate educational experiences and perceptions associated with a single introductory activity and does not seek to establish causal effects, objectively measured motor skill improvement, or sustained participation over time. Its scientific contribution is to provide a context-specific evaluative framework for examining how simplified racket-sport activities can be introduced within primary school educational settings while distinguishing instructional feasibility from demonstrated educational effectiveness. Its practical contribution concerns the identification of program components and evaluation indicators that may inform schools, physical education practitioners, and university-based community engagement teams when designing accessible introductory tennis activities. The study is expected to provide an empirical foundation for developing subsequent programs involving repeated practice, extracurricular participation, and more rigorous assessment of changes in pupils' interest and fundamental tennis skills.

RESEARCH METHODS

This study employed a descriptive-evaluative approach within a school-based community engagement program designed to introduce tennis and examine primary school pupils' immediate responses to introductory sporting activities. The program was conducted on 27 August 2026 at SD Negeri Model Sleman, Yogyakarta, Indonesia, involving 30 primary school pupils as participants and units of evaluation. The intervention consisted of tennis outreach, instructional demonstrations, guided practice, and simplified games organized through a mini tennis approach. Program implementation began with an introduction to the benefits of tennis, basic playing rules, and equipment characteristics, followed by demonstrations of racket handling and fundamental tennis movements. Participants subsequently engaged in ball-control exercises, basic stroke practice, paired drills, and simplified rallies using beginner-friendly balls, mini nets, and adapted playing areas on the school multipurpose court. These activities were organized in small groups to facilitate equipment sharing, direct participation, and instructional guidance during fundamental movement practice. The instructional sequence emphasized initial familiarity with tennis rather than technical mastery or competitive performance, allowing pupils to experience fundamental playing activities under simplified conditions. Data collection was structured around documentation of program implementation and questionnaire-based evaluation of participants' immediate responses. The available documentation included photographs illustrating participant involvement, equipment demonstrations, fundamental skill practice, and simplified rally activities. The study did not employ experimental or control groups, repeated intervention measurements, or objective performance testing; its evaluative scope was restricted to describing program implementation and participants' perceptions following the introductory activity.

Participant responses were evaluated using a structured questionnaire comprising ten statements measured on a four-point Likert scale, with response categories of strongly agree (4), agree (3), somewhat disagree (2), and disagree (1). The questionnaire covered enjoyment of the activity, comprehension of instructional explanations, clarity of facilitator guidance, familiarity with tennis equipment, understanding of racket handling, opportunities to attempt fundamental movements, interest in games and exercises, perceived safety and comfort, increased interest in tennis, and willingness to participate in future tennis activities. Each statement was evaluated descriptively using the distribution of responses across the four categories, while item scores were calculated from the numerical values assigned to each response category. The maximum possible score for an individual item was determined by multiplying the number of participants by the highest response value, producing 120 points for each statement, while the maximum total questionnaire score was 1,200

points. Item mean scores were calculated by dividing the sum of weighted response scores by the number of participants, and achievement percentages were obtained by dividing the observed item score by its maximum possible score and multiplying the result by 100. The overall mean was derived from the aggregate questionnaire scores, while the indicators concerning increased interest and willingness to participate again were considered together to describe pupils' immediate motivational responses. Data processing was limited to descriptive frequencies, percentages, and arithmetic means without inferential statistical testing or causal effect estimation. The available manuscript does not document the sampling procedure, questionnaire validation, reliability testing, or ethical approval arrangements; these procedures are consequently not claimed as completed. The questionnaire figures presented in the manuscript were simulated for article preparation rather than obtained from verified participant responses, meaning that they can illustrate the proposed descriptive analysis but cannot substantiate empirical conclusions about the participating pupils. Interpretation of program implementation was consequently distinguished from questionnaire-based outcome claims, and confirmation using authentic participant responses remains necessary before the evaluation can be presented as verified field evidence.

RESULTS AND DISCUSSION

Program Implementation

The tennis introduction program was conducted at SD Negeri Model Sleman on 27 August 2026, involving 30 primary school pupils in a series of structured instructional and practical activities. The program integrated introductory explanations, equipment demonstrations, fundamental movement exercises, and simplified tennis games to provide pupils with direct exposure to the sport. Its implementation emphasized participation and familiarity rather than technical mastery, reflecting the educational principle that introductory sports activities should accommodate differences in children's motor competence and learning readiness. Salters and Scharoun Benson (2022) identified the relevance of developmentally appropriate teaching strategies in supporting fundamental movement skill instruction, providing a pedagogical basis for organizing introductory activities around accessible movement experiences.



Figure 1. Group Photograph of Participants and Facilitators After the Tennis Introduction Program

The initial instructional stage introduced participants to the characteristics of tennis, including its basic rules, equipment, and potential benefits as a recreational and competitive sport. Facilitators demonstrated the use of rackets and balls before guiding pupils through elementary racket handling and ball-control movements. This instructional sequence allowed participants to observe the required actions before attempting them independently, although the available documentation does not establish the extent to which individual pupils mastered the demonstrated techniques. Research on physical literacy emphasizes the integration of movement competence, confidence, and participation opportunities within educational activities, suggesting that familiarization represents a relevant preliminary component of sports instruction (Grauduszus et al., 2024).



Figure 2. Facilitator Demonstrating How to Use Tennis Rackets and Balls

Practical activities were organized through a mini tennis approach involving beginner-friendly balls, mini nets, and modified playing areas on the school multipurpose court. These adaptations were intended to reduce the complexity of conventional tennis activities while retaining fundamental elements of racket handling, ball control, and movement responses. Participants practised elementary strokes and simple ball exchanges without being required to reproduce the technical and tactical demands of formal tennis competition. Li et al. (2024) examined the integration of small-sided games into physical education and provided evidence supporting the instructional relevance of modified playing conditions for motor ability development, although their findings cannot be interpreted as direct evidence of improvement among participants in the present program.



Figure 3. Pupils Practising Ball Control and Basic Strokes in a Mini Tennis Area

The instructional arrangement progressed from equipment familiarization and movement demonstrations toward practical exercises and simplified game situations. Pupils were organized into small groups to facilitate participation, equipment sharing, and guidance from facilitators during the activity. The sequence provided opportunities for repeated attempts at fundamental movements, although the available records do not specify individual practice duration, repetition counts, or the frequency of successful skill execution. Research synthesizing physical activity interventions among elementary school children indicates that structured learning opportunities are relevant to motor competence development, while differences in intervention characteristics must be considered when interpreting their effectiveness (Moon et al., 2024).

Table 1. Implementation Structure of the Introductory Mini Tennis Program

Program Component	Instructional Activities	Intended Learning Focus
Tennis introduction	Explanation of benefits, equipment, and basic rules	Initial knowledge and familiarity
Equipment demonstration	Demonstration of racket handling and ball use	Understanding equipment functions
Fundamental movement practice	Ball control and basic strokes	Hand–eye coordination and movement familiarization
Guided group exercises	Small-group and paired practice	Active participation and interaction
Mini tennis games	Simplified rallies using mini nets	Initial application of basic tennis movements
Program evaluation	Ten-item participant response questionnaire	Perceived enjoyment, understanding, comfort, and interest

Source: Program implementation procedures described in the study documentation, 2026.

Table 1 presents the instructional components implemented during the tennis introduction program and identifies their corresponding educational purposes. The activities demonstrate a progression from cognitive familiarization with tennis equipment and rules toward practical engagement with fundamental movements and simplified game situations. This progression is consistent with the educational rationale of game-based instruction, which integrates opportunities for skill application with meaningful participation in movement activities. Sun and Chen (2024) identified the relevance of sports game interventions to children's fundamental motor skills, although the present program did not employ objective motor assessments capable of establishing comparable intervention outcomes.

The use of modified playing conditions represented a practical response to the instructional demands of introducing tennis to inexperienced primary school pupils. Beginner-friendly equipment and simplified playing areas enabled introductory exercises to be conducted on an existing school multipurpose court rather than requiring a dedicated regulation-standard tennis facility. This arrangement demonstrates the feasibility of organizing basic racket-sport exposure using the facilities and materials described in the program, but it does not independently establish cost-effectiveness or equivalence with conventional tennis instruction. Jerebine et al. (2024) emphasized the multidimensional character of school-based physical literacy interventions, supporting consideration of instructional accessibility and participation opportunities alongside the development of physical abilities.

Direct participation in ball-control exercises and simplified rallies provided pupils with opportunities to experience the interaction between visual information and physical movement required in tennis. The activities involved observing ball trajectories, adjusting body position, controlling the racket, and attempting to direct the ball across the mini net. These instructional demands are relevant to the development of fundamental movement experiences, but the available documentation cannot demonstrate measurable improvements in coordination or motor competence following a single session. Bao et al. (2024) synthesized evidence concerning associations between motor competence and executive functions in children and adolescents, indicating the broader developmental relevance of motor abilities without establishing that the present introductory activities produced cognitive or motor improvements.



Figure 4. Simple Rally Practice with a Mini Net on the School Multipurpose Court

The program also incorporated participant interaction through paired exercises and simplified games, creating opportunities for pupils to practise fundamental movements within a shared learning environment. Such arrangements may support engagement because participants encounter manageable playing situations and opportunities to interact with their peers rather than practising techniques exclusively through isolated demonstrations. Research on game-based physical education has examined the relationship between game-oriented instruction and enjoyment among children and adolescents, providing a rationale for integrating structured play into introductory sporting experiences (Mo et al., 2024). The available photographic documentation confirms that practical activities formed part of the implementation, but it cannot establish pupils' psychological responses or substantiate claims concerning changes in their motivation.

The implementation records establish that the introductory program incorporated multiple instructional components relevant to initial tennis familiarization, including explanations, demonstrations, adapted equipment, guided exercises, and simplified rallies. Their integration provides a practical example of how established physical education principles can be translated into a school-based community engagement activity involving pupils with introductory learning needs. Ha et al. (2024) examined relationships among physical activity enjoyment, physical activity behavior, and motor competence in elementary school pupils, reinforcing the need to distinguish the provision of enjoyable activity opportunities from verified behavioral or developmental outcomes. The principal finding supported by the implementation documentation is the operational application of a structured mini tennis program within the participating school, while conclusions concerning increased interest, sustained participation, and motor skill improvement require authentic participant-response data or additional outcome measurements.

Questionnaire Evaluation Results and Pupils' Initial Interest in Tennis

The evaluation of the introductory tennis program was structured around pupils' immediate perceptions of instructional activities, practical experiences, and willingness to engage in tennis. The questionnaire comprised ten statements measured on a four-point Likert scale, covering enjoyment, instructional comprehension, equipment familiarity, fundamental movement experiences, safety, and interest in future participation. These indicators reflect the multidimensional character of engagement in physical education, where motivational responses cannot be represented adequately by participation alone. Fierro-Suero et al. (2023) emphasized the relationship between motivation, emotional experiences, and intentions toward physical activity, supporting the relevance of examining pupils' perceptions alongside their involvement in introductory sports instruction.

The evaluation framework included 30 participants, with a maximum possible score of 120 for each questionnaire item and 1,200 for the complete instrument. The available manuscript reports an aggregate mean of 3.70 on a four-point scale, corresponding to approximately 92.4% of the maximum possible score. These numerical values, however, were generated from simulated responses prepared for article development rather than verified questionnaires completed by the participating pupils.

Research concerning physical literacy assessment emphasizes the importance of appropriate measurement procedures and instrument quality, indicating that simulated responses cannot substitute for authenticated participant observations when evaluating educational outcomes (Barnett et al., 2023).

The simulated response distribution places enjoyment and perceived safety among the highest-rated aspects of the introductory program. Both indicators received mean scores of 3.87, equivalent to approximately 96.7% of the maximum possible score, suggesting how an evaluative framework could represent pupils' perceptions of an accessible learning environment. Such scores would be educationally relevant if confirmed by authentic responses because enjoyment and perceived comfort may influence pupils' willingness to engage with unfamiliar sporting activities. Ha et al. (2024) examined the relationships among physical activity enjoyment, participation behavior, and motor competence in elementary school pupils, providing a relevant basis for interpreting these constructs without treating the simulated scores as empirical findings.

Instructional comprehension and facilitator communication were assessed through statements concerning the clarity of explanations, understanding of equipment, and opportunities to attempt basic tennis movements. The simulated questionnaire assigned mean scores of 3.53 to both comprehension of instructional explanations and clarity of facilitator guidance, while familiarity with equipment received a mean of 3.70. This distribution illustrates how participant evaluations could distinguish favorable experiences of practical activities from instructional components requiring further clarification. Salters and Scharoun Benson (2022) emphasized the pedagogical significance of instructional strategies for fundamental movement skills, supporting the need to evaluate how effectively introductory activities communicate essential movement concepts to inexperienced learners.

Table 2. Simulated Questionnaire Evaluation of the Introductory Tennis Program

No	Evaluation Indicator	SA	A	SD	D	Mean	Achievement
1	Enjoyment of tennis activities	26	4	0	0	3.87	96.7%
2	Comprehension of explanations	20	6	4	0	3.53	88.3%
3	Clarity of facilitator guidance	18	10	2	0	3.53	88.3%
4	Familiarity with tennis equipment	23	5	2	0	3.70	92.5%
5	Understanding of racket handling	22	6	2	0	3.67	91.7%
6	Opportunity to practise basic movements	19	9	2	0	3.57	89.2%
7	Interest in games and exercises	25	3	2	0	3.77	94.2%
8	Perceived safety and comfort	26	4	0	0	3.87	96.7%
9	Increased interest in tennis	24	5	1	0	3.77	94.2%
10	Willingness to play tennis again	22	7	1	0	3.70	92.5%
	Reported aggregate					3.70	92.4%

Source: Simulated questionnaire data presented in the manuscript, 2026. SA = strongly agree; A = agree; SD = somewhat disagree; D = disagree.

Table 2 illustrates the distribution of the ten questionnaire indicators and provides a structured basis for examining differences across instructional and motivational dimensions. The simulated values suggest a pattern in which enjoyment and perceived comfort receive higher ratings than instructional comprehension and opportunities to practise fundamental movements, although these differences cannot be interpreted as observed participant experiences. The distinction is analytically relevant because favorable perceptions of an activity do not necessarily indicate equivalent understanding of its technical content or acquisition of movement competence. de Bruijn et al. (2023) examined physical activity and intrinsic motivation in primary school physical education, reinforcing the importance of distinguishing motivational engagement from other educational outcomes rather than treating them as interchangeable indicators.

Pupils' interest in tennis was represented by two questionnaire statements addressing perceived increases in interest and willingness to participate in future tennis activities. The simulated mean scores were 3.77 and 3.70, respectively, while the manuscript reported a combined mean of 3.73 and

an achievement percentage of approximately 93.3%. These indicators provide a descriptive structure for examining immediate motivational responses, but they cannot establish an actual increase in interest without verified participant data or an appropriate baseline measurement. Navarro-Patón et al. (2024) examined variations in motivation, basic psychological needs, and enjoyment across educational characteristics, indicating that expressions of interest should be interpreted with attention to the conditions under which motivational responses are obtained.

The distinction between immediate enjoyment and sustained sporting interest has methodological implications for evaluating introductory physical education programs. A participant may report positive experiences after a single activity without subsequently seeking opportunities for regular training or extracurricular participation. Reigal et al. (2024) examined the relationships among motivational orientation, self-esteem, motor self-efficacy, boredom, and enjoyment, demonstrating the conceptual relevance of psychological factors beyond immediate activity satisfaction. The present evaluation framework therefore provides indicators of perceived interest and future willingness but does not supply the longitudinal behavioral evidence necessary to determine whether initial enthusiasm develops into continuing tennis participation.

The inclusion of equipment familiarity and fundamental movement experiences provides an opportunity to interpret motivational indicators alongside practical aspects of introductory learning. The simulated scores for racket handling and opportunities to attempt basic movements were 3.67 and 3.57, respectively, indicating how the questionnaire could differentiate perceived instructional accessibility from reported enjoyment. These measurements represent pupils' subjective responses rather than direct assessments of movement accuracy, coordination, or acquired tennis proficiency. Moon et al. (2024) synthesized evidence concerning physical activity interventions designed to improve motor competence among elementary school children, emphasizing an outcome domain that would require separate performance-based measurement in the present setting.

The questionnaire framework demonstrates the potential value of distinguishing instructional quality, practical participation, enjoyment, perceived safety, and prospective interest when assessing introductory tennis activities. The reported scores provide an illustration of descriptive analysis but cannot support claims that the program increased pupils' interest or produced measurable educational improvements because the underlying responses remain simulated. Song et al. (2025) examined motivational outcomes associated with content-focused physical education interventions, supporting the relevance of investigating instructional content and motivation while underscoring the need to base effect-related conclusions on appropriate empirical evidence. Verification through authentic participant questionnaires, together with subsequent observation of participation and motor learning, would be necessary to establish whether the introductory mini tennis program achieves its intended educational outcomes.

Sustainability of the Introductory Tennis Program and Implications for School-Based Physical Education

The sustainability of introductory tennis activities represents an important consideration in determining whether initial sporting experiences can contribute to continued participation among primary school pupils. The program conducted at SD Negeri Model Sleman provided 30 pupils with opportunities to become familiar with tennis through demonstrations, fundamental movement exercises, and simplified games during a single implementation session. Although these activities established a structured opportunity for initial exposure, the available documentation does not demonstrate whether participants continued practising tennis after the program. Grauduszus et al. (2024) emphasized the relevance of school-based physical literacy promotion, suggesting that introductory sporting activities should be considered within broader educational arrangements that provide continuing opportunities for movement participation.

The use of mini tennis offers practical possibilities for extending introductory activities beyond a single community engagement event. Beginner-friendly balls, mini nets, and modified playing areas enabled the program to utilize existing school facilities without requiring a conventional tennis court for elementary practice. Such adaptations may support subsequent extracurricular activities, although their long-term feasibility depends on equipment availability, instructional capacity, scheduling, and institutional support that were not systematically assessed in the present program. Jerebine et al. (2024) examined school-based physical literacy interventions as multidimensional educational

arrangements, providing a conceptual basis for considering how adapted sporting activities might contribute to continuing opportunities for physical education.

The continuity of tennis participation also depends on the extent to which introductory activities accommodate differences in pupils' movement capabilities and learning readiness. The documented instructional sequence included racket familiarization, ball-control exercises, basic strokes, paired practice, and simplified rallies, providing a foundation for progressively structured learning activities. Subsequent instruction could extend these components through increasingly demanding movement tasks, although the present program did not evaluate progression across multiple sessions or measure changes in technical performance. Sun and Chen (2024) synthesized evidence on sports game interventions and fundamental motor skills, supporting the educational relevance of structured play while indicating an outcome domain that requires direct assessment before claims concerning skill development can be substantiated.

The relationship between positive initial experiences and sustained participation requires particular analytical attention because immediate enjoyment does not necessarily predict continued involvement in an unfamiliar sport. The manuscript's questionnaire framework included indicators of enjoyment, perceived safety, increased interest, and willingness to play tennis again, but its numerical responses were simulated and cannot establish actual motivational outcomes among participants. Research examining the relationship between physical activity enjoyment, behavior, and motor competence suggests that these dimensions warrant separate consideration when investigating children's sporting participation (Ha et al., 2024). Reigal et al. (2024) further examined motivational orientation, motor self-efficacy, and enjoyment, providing a rationale for future evaluations that distinguish favorable introductory experiences from the psychological and behavioral conditions associated with continuing participation.

Table 3. Program Sustainability Framework and Evidence Requirements for Introductory Tennis Activities

Development Component	Existing Program Basis	Potential Follow-Up Activity	Evidence Required
Instructional continuity	Introductory demonstrations and basic techniques	Periodic tennis practice	Session attendance and participation records
Fundamental motor skills	Ball control and basic strokes	Progressive movement exercises	Direct skill assessment
Learning accessibility	Mini nets and adapted equipment	Continued use of modified facilities	Equipment and facility assessment
Pupil motivation	Enjoyment and interest questionnaire indicators	Regular extracurricular opportunities	Verified repeated-response data
Social participation	Paired exercises and small-group games	Cooperative tennis activities	Structured participation observations
Institutional sustainability	School-based community engagement	School–university instructional cooperation	Documented implementation and follow-up arrangements

Source: Analytical framework developed from the documented program procedures and identified evaluation limitations, 2026.

Table 3 distinguishes the instructional components documented during program implementation from the additional activities and evidence required to evaluate their sustainability. The framework identifies continuity of instruction, motor skill development, accessibility, motivation, social participation, and institutional support as considerations for extending initial exposure into more regular sporting opportunities. Its purpose is not to classify these proposed measures as established program outcomes, but to clarify which dimensions could be examined through subsequent school-based evaluations. Barnett et al. (2023) reviewed the validity, reliability, and feasibility of physical literacy assessments, reinforcing the methodological importance of aligning evaluation instruments with the specific educational outcomes that researchers intend to measure.

School-based continuation also requires consideration of how instructional content influences pupils' motivation and opportunities for participation. Introductory explanations and movement demonstrations may help pupils understand tennis, but continued engagement would require activities that maintain accessibility while gradually introducing more complex movement and game situations. Song et al. (2025) examined the relationship between content-focused physical education interventions and motivation, providing a relevant theoretical basis for evaluating instructional design beyond the initial delivery of sporting activities. The present program did not compare alternative instructional sequences or document repeated participation, preventing conclusions about which components would be most effective for sustaining interest in tennis.

The development of extracurricular mini tennis activities could provide a practical pathway for increasing pupils' opportunities to experience racket sports within the school environment. The existing instructional arrangement demonstrated how ball-control exercises, simplified rallies, and group activities could be organized using adapted facilities, but it did not evaluate the availability of instructors or resources required for continued implementation. Mo et al. (2024) synthesized research on game-based physical education and enjoyment, indicating the relevance of structured games to motivationally oriented physical education design. Fierro-Suero et al. (2023) likewise examined motivational and emotional factors associated with physical education participation, supporting the inclusion of pupils' experiences and participation intentions in future program evaluation.

The educational significance of sustained mini tennis participation should also be considered in relation to fundamental movement competence and broader developmental opportunities. Introductory racket activities require pupils to coordinate visual information, body positioning, and object control, while progressive practice could provide additional opportunities to refine these movement demands. Research on associations between motor competence and executive functions establishes a wider developmental rationale for investigating movement-based learning, although such associations do not establish cognitive benefits arising from the present activity (Bao et al., 2024). Evidence concerning elementary school interventions aimed at motor competence development further supports the need for structured outcome measurement when determining whether repeated sporting activities produce measurable changes in physical skills (Moon et al., 2024).

Institutional cooperation may influence whether introductory tennis activities can be incorporated into regular physical education or extracurricular provision. The collaboration between the university-based community engagement team and SD Negeri Model Sleman established an implementation setting for introducing tennis, but the available documentation does not identify a formal continuation agreement, subsequent instructional schedule, or long-term monitoring arrangement. Salters and Scharoun Benson (2022) examined the implementation of fundamental movement teaching strategies in primary school physical education, highlighting the relevance of instructional practices to the organization of school-based movement learning. Future cooperation could prioritize facilitator preparation, adapted equipment, progressive practice activities, and evaluation procedures capable of documenting participation and learning outcomes.

The present program contributes a documented example of introductory mini tennis instruction organized through equipment familiarization, guided movement practice, and simplified game activities in a primary school setting. Its principal evidentiary limitation concerns the absence of verified questionnaire responses, longitudinal participation records, and objective motor assessments, which prevents the reported simulated evaluations from establishing actual improvements in interest or sporting competence. The distinction between immediate motivational indicators and continuing participation is consistent with research examining intrinsic motivation and physical activity experiences in primary school physical education (de Bruijn et al., 2023), while Navarro-Patón et al. (2024) emphasize the relevance of educational and motivational differences when interpreting pupils' engagement. The contribution of the program is consequently confined to its documented instructional implementation and the development of an evaluation framework that could support future empirical investigation of introductory tennis participation, learning experiences, and program continuity.

CONCLUSION

The introductory tennis program conducted at SD Negeri Model Sleman on 27 August 2026 provided 30 primary school pupils with opportunities to become familiar with tennis through instructional demonstrations, equipment introduction, fundamental movement exercises, and

simplified mini tennis games. The implementation demonstrated that introductory racket-sport activities could be organized using beginner-friendly balls, mini nets, modified playing areas, and existing school facilities. The structured activities enabled pupils to experience racket handling, ball control, basic strokes, paired exercises, and simple rallies without requiring the technical demands of conventional tennis competition. The program also established a descriptive evaluation framework covering instructional comprehension, practical participation, enjoyment, perceived safety, interest in tennis, and willingness to participate again. The manuscript reported an aggregate questionnaire mean of 3.70 out of 4 (92.4%) and a combined interest-related mean of 3.73 (93.3%), but these values were derived from simulated responses rather than verified participant data. Consequently, the reported questionnaire results cannot establish actual improvements in pupils' interest, motor competence, or continued sporting participation. The findings support conclusions concerning the feasibility of implementing the documented introductory activities, while their effectiveness in stimulating interest remains empirically unconfirmed.

The study contributes a practical instructional framework for introducing tennis to primary school pupils through developmentally appropriate equipment, guided movement experiences, and participatory games. Its principal contribution lies in documenting the integration of introductory instruction, simplified tennis practice, and multidimensional participant-response indicators within a school-based community engagement program. The instructional arrangement provides a reference for schools and physical education practitioners seeking to diversify sporting opportunities without depending exclusively on conventional tennis facilities. Continued implementation could involve regular extracurricular sessions, progressively structured fundamental movement exercises, and cooperation between schools and university-based sports education teams. The study is limited by its single-session implementation, the absence of objective motor performance measurements, the lack of longitudinal participation records, and the use of simulated rather than authenticated questionnaire responses. Future evaluations should obtain verified participant data and assess changes in sporting interest and fundamental tennis skills through appropriate measurements conducted across repeated activities. These improvements would permit stronger conclusions concerning the educational effectiveness and sustainability of introductory mini tennis programs while retaining the accessible instructional characteristics demonstrated by the present activity.

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