

The Need for Dance Education in Promoting Physical Activity Among Primary School Students

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Abstract: The purpose of this study was to examine the need for dance education in promoting physical activity among primary school students in general education schools. The study involved a total of 54 primary school students divided into two groups. The first group consisted of 27 students who had participated in classical dance training for at least one year, while the second group consisted of 27 students who had not participated in any form of dance education. In addition, questionnaire surveys were conducted among 34 music teachers to evaluate the implementation of “music and movement” activities included in the music curriculum of Mongolian general education schools.

The findings revealed that 88.8% of students who did not participate in dance education failed to meet the minimum level of physical activity recommended by the World Health Organization. In contrast, students who participated in classical dance training demonstrated higher levels of active movement and reported several positive outcomes. Most notably, participants reported improvements in physical fitness, movement coordination, and aesthetic sensitivity. Furthermore, 85.3% of surveyed teachers and the majority of participating students supported the inclusion of dance education within school curricula.

This study is significant in that it examines dance education as a potential approach for supporting physical activity and aspects of physical development at the primary education level. In addition, the study proposes the expansion of dance education as an independent curricular component within general education schools.

Keywords: dance education, physical activity, arts education, primary education

I. Introduction

The prevalence of overweight and obesity among primary school children in Mongolia has exceeded normal levels and has continued to increase in recent years. Although multiple factors contribute to childhood overweight and obesity, maintaining adequate physical activity is considered one of the most effective preventive approaches. Therefore, identifying methods to increase physical activity among primary school students has become an important educational and public health concern.

Previous studies have noted that children’s levels of physical activity tend to decline after entering formal schooling, leading to increasing risks of sedentary behavior and movement deficiency (Tremblay et al., 2014, p. 113). Within school environments, students spend a significant portion of their daily time in seated activities, while physical education classes are often insufficient in duration and accessibility. In addition, limitations related

to gymnasium facilities and school infrastructure may negatively affect opportunities to support children's physical development and active movement participation.

In response to these challenges, this study considers the school environment to be one of the most accessible and effective settings for promoting children's physical activity and movement capacity. Accordingly, the study explores the possibility of supporting students' physical activity through dance education.

At the primary education level in Mongolian general education schools, dance-related learning is currently incorporated within the "music and movement" component of music education rather than being taught as an independent subject. Therefore, this study aimed to evaluate the implementation of "music and movement" activities within music classes and to examine the accessibility and implementation conditions of physical education programs in general education schools. The research involved music teachers as well as students who participated and did not participate in extracurricular dance education.

This study is significant in that it seeks to clarify the necessity and educational value of dance education at the primary school level while providing theoretical and practical foundations for the further development of dance education within school curricula. The central hypothesis of the study is that the systematic implementation of dance education within school environments may positively contribute to students' physical activity levels and support aspects of physical development.

II. Literature Review

Throughout human history, dance has frequently been used as a means of developing physical strength and movement abilities, particularly within ancient cultures. In prehistoric societies, dance reportedly served practical purposes such as physical conditioning and psychological preparation before hunting and warfare. History of Dance discusses how early human communities utilized dance not only as a cultural activity but also as a form of physical training (Tuul, 2019, p. 19).

Ancient Greek philosopher Aristotle categorized education into three dimensions: physical, moral, and intellectual education (Dzhurinsky, 1999, as cited in Buyandelger, 2022, pp. 94–95). Similarly, philosophers such as Jean-Jacques Rousseau and Johann Friedrich Herbart regarded physical development as a fundamental component of culture and education.

In contemporary society, however, awareness and practice of physical culture have relatively declined due to rapid technological advancement, urbanization, and increasingly sedentary lifestyles. As physical movement becomes more limited, rates of overweight and obesity have continued to increase, contributing to the growing prevalence of non-communicable diseases.

In Mongolia, six national nutrition surveys assessing the nutritional status of the population have been conducted in 1992, 1999, 2004, 2010, 2016, and 2023 with the financial and technical support of the United Nations Children's Fund, the World Health Organization, and the Ministry of Health of Mongolia. Comparative analysis of the three most recent surveys indicates a continuous increase in obesity among children aged 6–11 years since 2010. The prevalence of obesity among primary school children increased from 0.6% in 2010 to 6.4% in 2016 and further to 8.3% in 2023 (see Table 1).

To address the increasing prevalence of childhood obesity, the World Health Organization established the Commission on Ending Childhood Obesity and published six groups of recommendations: (1) promoting healthy diets, (2) promoting physical activity, (3) pregnancy and preconception care, (4) early childhood diet and physical activity, (5) health, nutrition, and physical activity for school-aged children, and (6) weight management (WHO, 2016, p. VI). Notably, three of these recommendations directly emphasize the importance of increasing physical activity, which aligns closely with the central argument of this study.

Similarly, UNESCO emphasized in its 2015 policy guidelines on quality physical education that declining physical activity levels have become a global concern and contribute significantly to numerous health problems. Beyond public health concerns, UNESCO highlighted the importance of implementing policy-level measures to ensure that quality physical education is effectively integrated into school curricula (UNESCO, 2015).

Table 1. Mongolian national nutrition surveys

	2010 survey (Age 7-11)	2016 survey (Age 6-11)	2023 survey (Age 6-11)
Overweight	4.3%	28.6%	23.7%
Obesity	0.6%	6.4%	8.3%

According to recommendations published by the World Health Organization, children should engage in at least 60 minutes of active physical movement daily (WHO, 2010, p. 19). However, global statistics indicate that 84% of girls and 78% of boys do not achieve sufficient levels of physical activity. In many countries, insufficient physical activity has become normalized within society and is considered a major contributing factor to childhood obesity. Therefore, this study additionally examined the implementation and accessibility of physical education classes in order to evaluate whether primary school students are able to achieve adequate levels of active movement within school environments.

The challenges associated with implementing physical education programs have also been highlighted by researchers and professional educators. N. Gerelt-Od, curriculum developer and training manager at the Sports Secondary School, noted that physical education curricula generally include three to four objectives per lesson unit; however, differences in students' physical abilities and classroom conditions often make it difficult to fully achieve these objectives within a single class period. He further emphasized that overcrowded classrooms and the frequent practice of multiple classes sharing a single gymnasium significantly limit the effective implementation of curriculum content. Under such conditions, teachers are often limited to conducting only basic exercises, resulting in incomplete achievement of educational goals. Consequently, he suggested that increasing physical education classes to three hours per week may improve educational outcomes.

Similarly, N. Byambadorj, a physical education teacher at Secondary School No. 2 in Ulaanbaatar, observed that children's physical activity levels have declined alongside increased use of mobile devices and screen-based activities. He additionally noted observable changes in children's discipline and social interaction. According to his observations, many young children entering primary school in recent years demonstrate relatively low levels of physical development and movement activity due to insufficient participation in preschool educational environments.

Comparable conclusions were presented by Professor L. Urtnasan of the Mongolian National University of Education, who argued that although certain aspects of physical education curricula focusing on sports knowledge and physical skills are being implemented, students' development of self-directed health management habits remains comparatively weak. Furthermore, she noted that newly introduced curriculum components such as scarf exercises, dance, high jump, and rhythmic gymnastics are not implemented consistently across schools due to insufficient instructional materials, limited teacher creativity, and weak internal school supervision.

Since the 2014–2015 academic year, dance-related activities have been incorporated into Mongolian primary education curricula through the "music and movement" component within music education (Khatantuul, 2024). According to the curriculum, Grade I includes 12 movement-based activities, Grade II includes 10, Grade III includes 10, Grade IV includes 9, and Grade V includes 9 movement activities. Within the present study, surveys conducted among music teachers revealed that implementation of these "music and movement" activities

remains only partially successful, with insufficient classroom space identified as one of the major barriers to implementation.

In order to further examine the significance of dance education for children's physical development, it is necessary to consider findings from international research. For example, a Romanian study conducted by Cosma et al. (2016) involved 16 children aged approximately 7 (± 1.5) years who participated in dance exercises twice per week for five months as part of physical education classes. Pre- and post-intervention motor assessments demonstrated significant improvements in balance, abdominal and back muscle strength, and general motor abilities. Based on these findings, the researchers concluded that dance education positively contributes to the development of balance, strength, movement coordination, and psychomotor abilities among children.

Likewise, a study conducted by Anjos and Ferraro (2018) examined 85 first-grade students who participated in a seven-month dance education program. The findings revealed that children participating in the dance program demonstrated significantly greater improvements in general motor development, balance, and fine motor skills compared to children in the control group. Furthermore, the study found that children who regularly participated in dance education demonstrated movement control abilities approximately nine months more advanced than those who did not participate. The researchers concluded that because cognitive development is closely associated with movement coordination, dance education may support not only physical development but also cognitive development among children.

III. Methodology

This study employed a comparative cross-sectional survey design using quantitative descriptive analysis in order to examine the necessity of dance education for primary school students.

The study involved questionnaire surveys were conducted with 34 music teachers from general education schools and 54 primary school students aged 6–10 years. The student participants were divided into two groups using purposive sampling methods.

The first group consisted of 27 primary school students who participated in extracurricular classical ballet training, while the second group consisted of 27 primary school students who had not participated in any form of extracurricular dance education.

Participants in the first group were recruited from the Hongoro's Ballet School and La Sylphide Ballet School, two ballet schools that have operated continuously in Ulaanbaatar for approximately 10–20 years. The participants were students in Grades 1–5, aged between 6 and 10 years, who had attended ballet training sessions twice per week for 1 hour and 30 minutes per session over a period of at least one year. All participants in this group were female students. The students attended different general education schools within Ulaanbaatar.

The second group consisted of primary school students from Ekhlel Secondary School and Oyunii Undraa Complex School in Ulaanbaatar. Participants were students in Grades 1–5 aged between 6 and 10 years. This group included 21 female students and 6 male students. Students in this group met the selection criterion of not participating in dance education or extracurricular activities requiring structured physical movement.

The questionnaire findings from the two student groups were comparatively analyzed in order to examine perceived changes associated with participation in dance education and to explore whether there is a need for dance education within school environments.

Questionnaire administration was conducted with the approval of classroom teachers, and parental or guardian consent was obtained prior to student participation.

In addition to student surveys, questionnaire research was conducted among 34 music teachers from urban and rural general education schools in Mongolia. The survey aimed to examine the implementation of the “music and movement” component within music education curricula and to identify challenges encountered during instruction. The findings were used to evaluate the current conditions and implementation practices of movement-based activities within general education schools.

IV. Results

Table 2. Physical activity levels

Response category	Dance group (n=27)	Non-dance group (n=27)
Always active	51.9%	7.4%
Mostly active	14.8%	3.7%
Sometimes active	11.1%	0%
Occasionally active	3.7%	37%
Rarely active	11.1%	40.7%
Never	7.4%	11.1%

The questionnaire items used in this study were developed based on the World Health Organization recommendations on physical activity and findings from previous educational studies. In order to examine the implementation of these recommendations, questionnaire surveys were conducted among 54 students and their parents or guardians.

Participants were asked the following question: *Is your child able to engage in active physical activity for at least 60 minutes per day, three times per week?*

Among students participating in dance education, 51.9% (14 students) responded “always active”, 14.8% (4 students) responded “mostly active” and 11.1% (3 students) responded “sometimes”. In contrast, among students who did not participate in dance education, 40.7% (11 students) responded “rarely active”, 37% (10 students) responded “occasionally active” and 11.1% (3 students) responded “never” (see Table 2).

In order to identify perceived changes associated with dance education, students in the dance participation group were asked to select multiple responses describing improvements they had experienced through classical ballet training. Among the 27 participants, 23 students reported improvements in physical fitness, while the same number reported enhanced cultural, artistic, and aesthetic sensitivity. In addition, 20 students reported improvements in social interaction and teamwork skills, 18 students reported increased concentration and memory, and 17 students reported increased self-confidence (see Table 3).

Table 3. Perceived benefits of Dance Education

Response category	Dance group (n=27)	
	Frequency	Percentage
Improved physical fitness	23	85.2%
Increased creativity	13	48.1%

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Improved concentration and memory	18	66.7%
Improved critical thinking skills	14	51.9%
Improved academic performance and learning ability	6	22.2%
Increased self-confidence	17	63%
Improved social interaction and teamwork skills	20	74.1%
Enhanced cultural and aesthetic sensitivity	23	85.2%
No noticeable changes observed	0	0%

Furthermore, among all 54 participating students from both groups, 30 students supported including dance education as a formal subject within the primary school curriculum, while 24 students supported offering dance education as an elective course. Notably, no students opposed the inclusion of dance education within general education schools.

Students who supported dance education in primary schools provided several explanations for their responses, including the need for increased physical activity opportunities, improvement of movement coordination and aesthetic sensitivity, and limited access to extracurricular training opportunities outside school environments (see Table 4).

Table 4. Students attitudes towards Dance education

Response category	Dance group (n=27)	Non-dance group (n=27)
I support it because children are unable to engage in sufficient physical activity.	51.9%	70.4%
I support it because parents often do not have the opportunity to take children to extracurricular training centers.	29.6%	51.9%
I support it because dance education improves movement coordination and aesthetic sensitivity.	88.9%	70.4%
I do not support it because students should focus on core subjects such as Mongolian language and mathematics.	3.7%	0%
I do not support it because additional subjects would increase the length of school hours.	3.7%	0%
I do not support it because students are not interested in dance classes.	0%	0%

The implementation of the “music and movement” component included in the music curriculum was further examined through surveys conducted among 34 music teachers. In response to the question, *Do you teach*

music and movement or dance exercises?” teachers responded as follows: one teacher selected “never,” eight selected “rarely,” fourteen selected “partially,” seven selected “mostly,” and four selected “fully.” Based on these findings, the implementation level of movement-based activities within music education may be considered moderate (see Table 5).

Teachers were additionally asked about the reasons limiting the full implementation of movement-based activities. Participants were allowed to select multiple responses. The majority of respondents (67.6%) identified insufficient classroom space as the primary barrier. Other frequently reported challenges included overloaded curricula focusing mainly on music instruction (32.4%), insufficient instructional time (20.6%), limited student interest (14.7%), and lack of professional specialization in dance education among music teachers (11.8%) (see Table 6).

Table 6. Reasons limiting full implementation of movement-based activity

Response category	Music teachers (n=34)	
	Frequency	Percentage
Insufficient instructional time	7	20.6%
Overloaded curriculum, music and singing activities are prioritized	11	32.4%
The teacher is not professionally trained in dance education	4	11.8%
Due to insufficient classroom space and facilities	23	67.6%
Students show limited interest	5	14.7%

Responses to the question regarding teachers’ general perspectives on movement and dance activities indicated that teachers considered such activities highly necessary and beneficial for children’s learning abilities, physical development, and self-expression. However, respondents also emphasized limitations related to classroom space and the need to improve curricula according to students’ interests and developmental needs.

Table 5. Teacher perspectives on “music and movement” activities

Response category	Music teachers (n=34)	
	Frequency	Percentage
Fully implementing	4	11.8%
Mostly implementing	7	20.6%
Partially implementing	14	41.2%
Rarely implementing	8	23.5%
Never implementing	1	2.9%

Finally, when teachers were asked whether music and dance should be taught as separate subjects, 85.3% supported separation of the subjects, 11.8% did not support the idea, and 2.9% responded that they were uncertain.

V. Discussion

These findings are consistent with previous international studies suggesting that dance education may positively contribute to children's movement coordination, physical activity, and psychomotor development.

The prevalence of overweight and obesity among children aged 6–11 in Mongolia remains relatively high and has continued to increase in recent years. This trend may be associated with declining levels of physical activity and increasing sedentary behavior among children. Therefore, policy-level interventions within school environments appear necessary in order to promote active movement opportunities for all students within general education systems.

The observations of researchers and educators discussed in this study indicate that several factors negatively affect the implementation of physical education classes in Mongolian general education schools. These factors include overloaded curricula, large class sizes, insufficient gymnasium facilities, and limited instructional time. As a result, curriculum objectives are often not fully achieved, and opportunities for students to participate in sufficient active movement during school hours remain restricted.

Although the World Health Organization recommends that children engage in at least 60 minutes of active physical movement daily, the findings of this study suggest that students participating in dance education demonstrate comparatively higher levels of physical activity than students who do not participate in dance education. In contrast, students without dance training were more likely to demonstrate insufficient levels of active movement.

The findings additionally suggest that the current implementation of "music and movement" activities within music education may not be sufficient to fully support primary school students' movement needs. Large classroom sizes, limited physical space, and movement activities that may not fully correspond to children's developmental and psychological characteristics appear to limit effective implementation. These issues indicate the need for greater attention at the educational policy level regarding movement-based learning opportunities within schools.

Nevertheless, the majority of teachers participating in the study acknowledged that movement and dance activities play an important role in supporting children's physical and cognitive development. This finding reflects a generally positive perception regarding the educational value of dance-related instruction.

Furthermore, all participating students and parents supported the inclusion of dance education within school curricula, while 85.3% of surveyed music teachers also supported the idea of offering dance as a separate subject. These findings suggest a strong perceived need for dance education within Mongolian primary education.

Limitations

This study was conducted with the cooperation and support of primary school students and their parents or guardians. Several limitations should be acknowledged.

First, the study relied primarily on self-reported data obtained through questionnaires, and no direct physical measurements or standardized physical fitness assessments were conducted by the researcher. Therefore, the findings reflect participants' perceived physical activity and developmental changes rather than objectively measured physical outcomes.

Second, all student participants were from schools located in Ulaanbaatar, which may limit the generalizability of the findings to other regions of Mongolia.

Third, the dance participation group consisted entirely of female students, whereas the non-dance group included both female and male students. This difference may limit gender comparability between the two participant groups.

Finally, the music teacher participants were selected through purposive sampling and included teachers from both urban and rural general education schools.

Ethical Considerations

Participation in this study was voluntary. Parents or guardians provided informed consent prior to questionnaire administration. Participant anonymity and confidentiality were maintained throughout the research process.

VI. Conclusion

The findings of this study suggest that many primary school students in Mongolia do not achieve sufficient levels of active physical movement. Although movement-based activities are incorporated into physical education and music curricula, the implementation of these activities appears limited due to insufficient instructional time, large class sizes, and restricted classroom and gymnasium facilities.

In contrast, students who regularly participated in extracurricular classical dance training reported higher levels of physical activity as well as perceived improvements in physical fitness and movement coordination.

Based on the findings of this study, it may be concluded that introducing dance education more systematically within primary school environments, or integrating dance-related activities into movement-oriented subjects, could contribute positively to students' health, physical activity, and aspects of physical development.

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