A Review of Laban Movement Analysis Applications in Children's Muscular Coordination and Body Control Abilities.

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Abstract

This study adopts a literature review approach to explore the long-term impact of childhood physical activity on health, focusing on the application of **Laban Movement Analysis (LMA)** in the development of children's body control abilities. The findings indicate that physical activity levels among school-aged children in Taiwan generally fall below international standards. However, the four dimensions of LMA—**Body, Effort, Space, Shape and Relationship**—provide a robust theoretical foundation for assessing and enhancing the quality of movement in children, offering a systematic framework for physical education.

Definition of Terms

Motor development

Motor development refers to the continuous process of change in an individual's movement behavior throughout the lifespan. This developmental process follows predictable and sequential patterns, including the "cephalo-caudal principle," where development extends from the head downward to the limbs, and the "proximo-distal principle," where development progresses from the center of the body outward to the periphery. Furthermore, it exhibits a developmental trend that evolves from foundational stability movements toward increasingly complex manipulative movements that emphasize coordination (Po et al., 2016; Chen et al., 2016; Wang, 2014).

Literature review

Physical activity during childhood has long-term effects on physical health. Insufficient physical activity increases the risk of cardiovascular disease in adulthood (Chen & Chiang, 2006), while children’s participation in physical activity is also associated with body composition and physical fitness (Chang & Chen, 2010). These findings highlight childhood as a critical period for developing a healthy body. However, in Taiwan, the physical activity levels of school-aged children remain significantly below international recommendations (Tsai & Wu, 2009). According to physical fitness indicators published by the Ministry of Education, body composition, flexibility, muscular endurance, explosive power, and cardiorespiratory endurance are essential measures of physical function. Considering children’s developmental characteristics, coordination and agility should also be included as important indicators (Liao et al., 2008).

Born in 1879, Rudolph von Laban's primary contributions stem from the creation of Laban Movement Analysis (LMA) and Labanotation. Laban derived LMA by observing various forms of movement—such as folk dance, martial arts, rituals, and labor—to induce the fundamental factors influencing human movement. The framework consists of four main elements: Body, Effort, Shape, and Space (BESS). By exploring the relationships between these elements, one can understand the connection between movement and emotion, which further facilitates communication and interaction with others. While LMA provides the theoretical structure for physical movement, Labanotation converts bodily actions into readable and writable symbols, simultaneously representing body parts, spatial orientation, and duration (Wang, 2023).

In his own writing, Laban (1980) posited that practicing various movement qualities—such as pressing, punching, flicking, and floating—can balance increasingly rigid bodily habits, maintain coordination and aesthetic beauty, and help children regain their innate spontaneity. To help children master movement elements, Rudolf von Laban established Sixteen Basic Movement Themes. These themes provide a structured approach to movement education:

1. Themes concerned with the awareness of the body.
2. Themes concerned with the awareness of weight and time.
3. Themes concerned with the awareness of space.
4. Themes concerned with the awareness of the flow of the weight of the body in space and time.
5. Themes concerned with the adaptation to partners.
6. Themes concerned with the instrumental use of the limbs of the body.
7. Themes concerned with the awareness of isolated actions.
8. Themes concerned with occupational rhythms.
9. Themes concerned with the shapes of movement.
10. Themes concerned with combinations of the eight basic effort actions: Dab, Flick, Float, Glide, Press, Punch, Slash, and Wring.
11. Themes concerned with space orientation.
12. Themes concerned with shapes and efforts using different parts of the body.
13. Themes concerned with elevation from the ground.
14. Themes concerned with the awakening of group feeling.
15. Themes concerned with group formations.
16. Themes concerned with the expressive qualities or mood of movements.

Chang (2007) argued that utilizing Laban’s movement elements can effectively assist students in expanding their movement repertoire, establishing self-understanding, and improving body control. Furthermore, Li and Liu (2023) utilized LMA as a tool for early childhood dance education; their findings indicated that creative dance designed within the LMA framework enhances children's motor coordination.

Conclusion

Early motor development is a critical foundation for later cognitive, academic, and social development, and proficiency in fundamental motor skills influences the learning of more complex skills and overall life participation (Po et al., 2016). In children’s physical education, applying elements of Laban Movement Analysis (LMA) can enhance motor planning, control, and learning. By emphasizing Effort, Space, and Shape, LMA supports more refined motor planning and regulation of movement quality, promoting smoother and more efficient movement. This embodied learning approach fosters adaptive and flexible motor control.

References

1. **Chang, H. C., & Chen, J. F. (2010).** The impact of the characteristics of children's sports participation on body mass index. *Journal of Sport, Leisure and Hospitality Research, 5*(4), 50–60. https://doi.org/10.29429/JSLHR.201012_5(4).04 [In Chinese]
2. **Chang, C. N. (2007).** *The treasure of creative dance: Connecting the veins of the Grade 1-9 dance curriculum*. National Institute for Compilation and Translation. [In Chinese]
3. **Chen, Y. H., & Chiang, L. C. (2006).** Evaluating the assessment tool for children's physical activity. *Chinese Journal of School Health, (48)*, 117–129. https://doi.org/10.30026/CJSH.200606.0007 [In Chinese]
4. **Laban, R. (1975).** *Modern educational dance* (3rd ed., L. Ullmann, Rev.). Macdonald and Evans. (Original work published 1948)
5. **Li, S., & Liu, S. Y. (2023).** Dancing with words and playing with poetry: Innovating creativity in early childhood dance. *Taiwan Dance Research Journal, (18)*, 35–81. https://doi.org/10.6303/TDRJ.202312_(18).0002 [In Chinese]
6. **Liao, H. F., Cheng, L. Y., Hsieh, W. S., Yang, M. C., Tsou, K. S., & Tsai, K. Y. (2008).** The reliability and validity of the developmental items of "Child Health Pamphlet" (DICHP). *Formosan Journal of Medicine, 12*(5), 502–512. https://doi.org/10.6320/FJM.2008.12(5).02 [In Chinese]
7. **Physical Therapy Association of the R.O.C. (Taiwan). (2010, September 26).** *Abstracts of the 61st Academic Conference of the Physical Therapy Association of the R.O.C. (Taiwan)*. Hungkuang University.
8. **Po, Y. H., Chen, C. L., Chang, C. J., Chen, P. H., Chen, H. C., Chung, C. Y., Wang, C. C., Fu, R. H., & Chou, L. T. (2016).** Preliminary study of the Developmental Motor Assessment Scale for Preschool Children (DMASPC): Development and validation. *Taiwan Journal of Physical Medicine and Rehabilitation, 44*(2), 71–80. [In Chinese]
9. **Tsai, C. C. (1988).** Literature review and prospect of motor development assessment and treatment for infants and young children. *Journal of Hungkuang Junior College of Nursing, (16)*, 110–112. [In Chinese]
10. **Tsai, M. S., & Wu, Y. T. (2009).** A preliminary study of children's physical activity in Taiwan. *Formosan Journal of Medicine, 13*(1), 23–32. https://doi.org/10.6320/FJM.2009.13(1).03 [In Chinese]
11. **Wang, C. Y. (2014).** Discussion of young children's physical motor development from the perspective of motor games. *Annual Journal of Early Childhood Motor Skills and Games, (8)*, 43–48. [In Chinese]
12. **Wang, Y. Y. (2023).** *Movement analysis: Understanding the body, understanding oneself*. Airiti. [In Chinese]